02-8710-43-PA REV. NO. 0

PRELIMINARY ASSESSMENT **NEW YORK AIR BRAKE LANDFILL** WATERTOWN, NEW YORK

PREPARED UNDER

TECHNICAL DIRECTIVE DOCUMENT NO. 02-8710-43 CONTRACT NO. 68-01-7346

FOR THE

ENVIRONMENTAL SERVICES DIVISION U.S. ENVIRONMENTAL PROTECTION AGENCY

JULY 22, 1988

NUS CORPORATION SUPERFUND DIVISION

SUBMITTED BY:

RICHARD J. LORFING

SITE MANAGER

REVIEWED/APPROVED BY:

FIT OFFICE MANAGER

337899



POTENTIAL HAZARDOUS WASTE SITE

PRELIMINARY ASSESSMENT

02-8710-43-PA Rev. No. 0

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	Prepared by:	Kenneth Bogdan of NUS Corporatio	<u>_</u>	Date:Jul	y 22, 1988		. *

EPA

POTENTIAL HAZARDOUS WASTE SITE PRELIMINARY ASSESSMENT

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State groundwater sta	indards. The	site is not completely	fenced or adequate	ely covered.			
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POTENTIAL HAZARDOUS WASTE SITE I. IDENTIFICATION **EPA** PRELIMINARY ASSESSMENT 01 STATE 02 SITE NUMBER **PART 2 - WASTE INFORMATION** D980532543 II. WASTE STATES, QUANTITIES, AND CHARACTERISTICS 01 PHYSICAL STATES (Check all that apply) 02 WASTE QUANTITY AT SITE 03 WASTE CHARACTERISTICS (Check all that apply) (Measures of waste quantities A. TOXIC E. SOLUBLE I. HIGHLY VOLATILE **⊠** A. SOLID ☐ E. SLURRY must be independent) B. CORROSIVE F. INFECTIOUS J. EXPLOSIVE ☐ B. POWDER, FINES **⊠** F. LIQUID C. RADIOACTIVE K. REACTIVE **⊠** G. FLAMMABLE C. SLUDGE ☐ G. GAS L. INCOMPATIBLE D. PERSISTENT H. IGNITABLE TONS □ D. _ **CUBIC YARDS** 86,652 M. NOT APPLICABLE (SPECIFY) NO. OF DRUMS 2970 III. WASTE TYPE 02 UNIT OF MEASURE **01 GROSS AMOUNT** 03 COMMENTS CATEGORY SUBSTANCE NAME SLU SLUDGE gallons **OILY WASTE** 127,125 **OLW** 8178 gallons SOL SOLVENTS **PSD PESTICIDES** OCC OTHER ORGANIC CHEMICALS Unknown IOC **INORGANIC CHEMICALS** 1917 ACD **ACIDS** BASES BAS gallons MES **HEAVY METALS** Chromium in solutions IV. HAZARDOUS SUBSTANCES (See Appendix for most frequently cited CAS Numbers) 06 MEASURE OF **05 CONCENTRATION** 04 STORAGE/DISPOSAL METHOD 01 CATEGORY **02 SUBSTANCE NAME** 03 CAS NUMBER CONCENTRATION SOL 127-18-4 Leachate 23 daa Tetrachioroethylene 156592 On-site monitoring well 8900 ppb SOL trans-1,2-Dichloroethylene 79-01-6 2700 SOL Trichloroethylene On-site monitoring well ppb 75-01-4 On-site monitoring well 41 daa SOL Vinyl Chloride V. FEEDSTOCKS (See Appendix for CAS Numbers) **CATEGORY** 01 FEEDSTOCK NAME 02 CAS NUMBER CATEGORY 01 FEEDSTOCK NAME **02 CAS NUMBER FDS FDS**

VI. SOURCES OF INFORMATION (Cite specific references, e.g. state files, sample analysis, reports)

Analytical results of sampling conducted on April 19-22, 1988 by Recra Environmental, Inc., for Lozier Architects and Engineers, at New York Air Brake Landfill.

NYSDEC Region 6 Background File

FDS

FDS

FDS

FDS

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POTENTIAL HAZARDOUS WASTE SITE I. IDENTIFICATION **EPA** PRELIMINARY ASSESSMENT 01 STATE **02 SITE NUMBER** PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS NY D980532543 II. HAZARDOUS CONDITIONS AND INCIDENTS 01 X A. GROUNDWATER CONTAMINATION 02 X OBSERVED (DATE: April, 1988 POTENTIAL ☐ ALLEGED 03 POPULATION POTENTIALLY AFFECTED: 04 NARRATIVE DESCRIPTION Organic contaminants and heavy metals have been found in monitoring wells around the landfill, both upgradient and downgradient. However, it has not been determined that this contamination is attributable to the landfill. Groundwater in the area is used only to supply a trailer park and two small subdivisions within 3 miles of the site. 01 B. SURFACE WATER CONTAMINATION POTENTIAL ALLEGED 02 OBSERVED (DATE: 03 POPULATION POTENTIALLY AFFECTED: Unknown 04 NARRATIVE DESCRIPTION A potential for surface water contamination does exist because of an unnamed tributary crossing the northern portion of the landfill. The tributary then flows into Kelsy Creek, which in turn flows into the Black River. The Black River is used to supply the city of Watertown with drinking water; however, the intakes are upstream of the point where Kelsey Creek enters the river. Because the Black River is used for swimming, boating, and fishing, there is a potential for population exposure. 01 X C. CONTAMINATION OF AIR 02 OBSERVED (DATE: X POTENTIAL ☐ ALLEGED 03 POPULATION POTENTIALLY AFFECTED: 34,219 04 NARRATIVE DESCRIPTION There have not been any reports of air contamination. There is a slight potential for air contamination due to the disposal of solvents 01 X D. FIRE/EXPLOSIVE CONDITIONS X POTENTIAL 02 OBSERVED (DATE: 04 NARRATIVE DESCRIPTION 02 OBSERVED (DATE: 04 NARRATIVE DESCRIPTION 525 02 OBSERVED (DATE: X POTENTIAL 04 NARRATIVE DESCRIPTION (Acres) There is a potential for soil contamination because there are contaminants present in the leachate emanating from the landfill. 01 X G. DRINKING WATER CONTAMINATION 02 OBSERVED (DATE: 03 POPULATION POTENTIALLY AFFECTED: 04 NARRATIVE DESCRIPTION 260...

ALLEGED 03 POPULATION POTENTIALLY AFFECTED: 525 There has been evidence of burning waste in the past, but there have been no complaints of fire recently. Since there is a significant leachate problem, the potential for fire does exist. 01 X E. DIRECT CONTACT POTENTIAL ALLEGED 03 POPULATION POTENTIALLY AFFECTED: The potential for direct contact does exist because the landfill is not fenced and is inadequately covered. NYSDEC personnel have observed children playing near the landfill. 01 X F. CONTAMINATION OF SOIL ALLEGED 03 AREA POTENTIALLY AFFECTED: E) X POTENTIAL ALLEGED There is a slight potential for drinking water contamination. Although the point where Kelsy Creek meets the Black River (Watertown's drinking water supply) is approximately 2 miles downstream from water intakes, the groundwater in the area is used for drinking by two small subdivisions and a trailer park within 3 miles. 01 H. WORKER EXPOSURE/INJURY 02 OBSERVED (DATE: POTENTIAL ALLEGED 03 WORKERS POTENTIALLY AFFECTED: 04 NARRATIVE DESCRIPTION There is no potential for worker exposure because the site is inactive. 01 I. POPULATION EXPOSURE/INJURY 02 OBSERVED (DATE: POTENTIAL ALLEGED 03 POPULATION POTENTIALLY AFFECTED: 04 NARRATIVE DESCRIPTION 34,219 There is a potential for population exposure, as light potential exists for contamination of wells used by two small subdivisions and a trailer park within 3 miles of the site. The Black River, which is possibly contaminated, is used for swimming, fishing, and boating. Also, there is a potential for direct contact as the landfill is not fenced. 02-8710-43-PA Rev. No. 0 CONFORMS WITH EPA FORM 2070-12 (7-81)

POTENTIAL HAZARDOUS WASTE SITE I. IDENTIFICATION PRELIMINARY ASSESSMENT **02 SITE NUMBER** 01 STATE PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS D980532543 IL HAZARDOUS CONDITIONS AND INCIDENTS (CONTINUED) 02 OBSERVED (DATE: _____) X POTENTIAL ALLEGED 01 X J. DAMAGE TO FLORA 04 NARRATIVE DESCRIPTION There is a potential for contamination of flora due to contaminants disposed of on site; however, vegetation is very sparse. 01 X K. DAMAGE TO FAUNA 02 OBSERVED (DATE: _____) X POTENTIAL ALLEGED 04 NARRATIVE DESCRIPTION (include name(s) of species) There is potential for fauna to come in contact with contaminated leachate because the site is not fenced. 01 X L. CONTAMINATION OF FOOD CHAIN 02 OBSERVED (DATE: _____) X POTENTIAL ALLEGED 04 NARRATIVE DESCRIPTION There is a potential for food chain contamination in the small creek that flows across the northern edge of the landfill. Contaminants may enter the creek via groundwater and surface runoff. 01 X M. UNSTABLE CONTAINMENT OF WASTES 02 X OBSERVED (DATE: _____) POTENTIAL ALLEGED (Spills, Runoff, Standing liquids, Leaking drums) 04 NARRATIVE DESCRIPTION 03 POPULATION POTENTIALLY AFFECTED: __ The landfill is unlined. In addition, NYSDEC has observed that waste is inadequately covered. Leachate has also been observed entering the small stream on site. 02 OBSERVED (DATE: ______) X POTENTIAL ALLEGED 01 X N. DAMAGE TO OFF-SITE PROPERTY 04 NARRATIVE DESCRIPTION There is a potential for damage to off-site property, if contaminants migrate off site via the small creek. 01 O. CONTAMINATION OF SEWERS, STORM DRAINS, WWTPS 02 OBSERVED (DATE: _____) POTENTIAL ALLEGED 04 NARRATIVE DESCRIPTION There is no potential for contamination of sewers or storm drains: the leachate generated at the landfill drains into a small stream flowing across the northern edge of the site, and there are no sewers or storm drains in this area. 01 X P. ILLEGAL/UNAUTHORIZED DUMPING) X POTENTIAL ALLEGED 02 OBSERVED (DATE: _ 04 NARRATIVE DESCRIPTION There is potential for unauthorized dumping as the site is not fenced. 05 DESCRIPTION OF ANY OTHER KNOWN, POTENTIAL, OR ALLEGED HAZARDS III. TOTAL POPULATION POTENTIALLY AFFECTED: 34,219 IV. COMMENTS V. SOURCES OF INFORMATION (Cite specific references, e.g. state files, sample analysis, reports) Telecon Note: Conversation between Don Hessler of NYSDEC, Region 6, and Ken Bogdan, NUS Corp., 2/23/88, 2/23/88, 9/9/88, 9/12/88. Telecon Note: Conversation between Darryl Swerdosky of NYSDEC, Region 6, and Ken Bogdan of NUS Corp., 3/4/88, 3/14/88. Telecon Note: Conversation between Pete Morton of Lozier Architects Engineers, and Ken Bogdan, NUS Corp., 9/14/88.

ATTACHMENT A

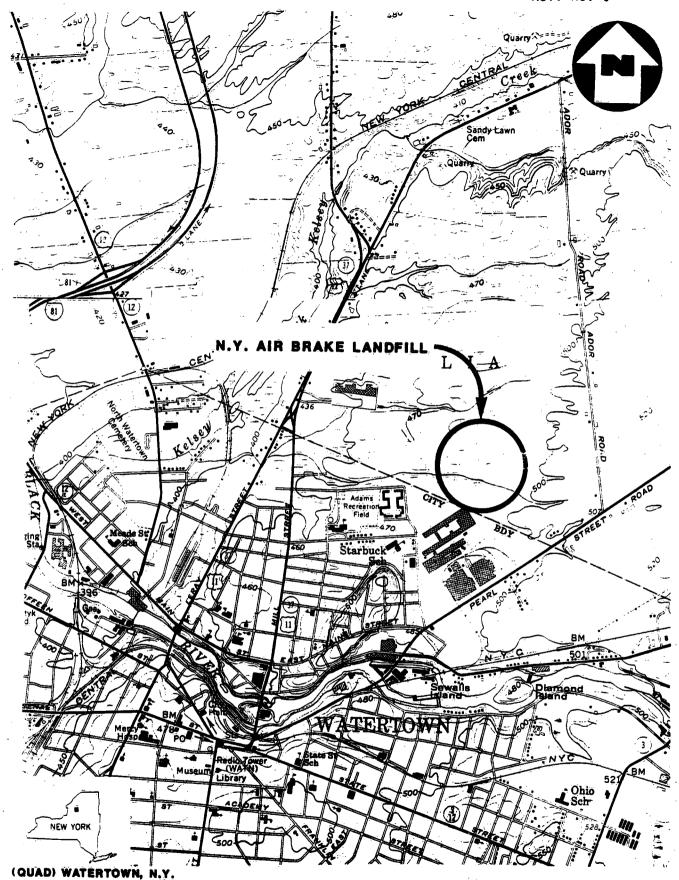
POTENTIAL HAZARDOUS WASTE SITE PRELIMINARY ASSESSMENT PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

V SOURCE OF INFORMATION (Cite specific references, e.g. state files, sample analysis, reports)

NYSDEC Region 6 Background File.

U.S. Department of Interior Geological Survey Topographic Map 7.5 Series "Watertown, NY; Quadrangle 1959. New York State Department of Health, Community Water Systems Atlas, 1982.

APPENDIX A MAPS AND PHOTOS



SITE LOCATION MAP

N.Y. AIR BRAKE LANDFILL, WATERTOWN, N.Y.

SCALE: 1'= 2000'



SITE MAP

N.Y. AIR BRAKE CO., WATERTOWN, N.Y.

NOT TO SCALE

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FIGURE 2

EXHIBIT A

PHOTOGRAPH LOG

NY AIR BRAKE LANDFILL WATERTOWN, NEW YORK

NOVEMBER 20, 1987

NY AIR BRAKE LANDFILL WATERTOWN, NEW YORK NOVEMBER 20, 1988

PHOTOGRAPH INDEX

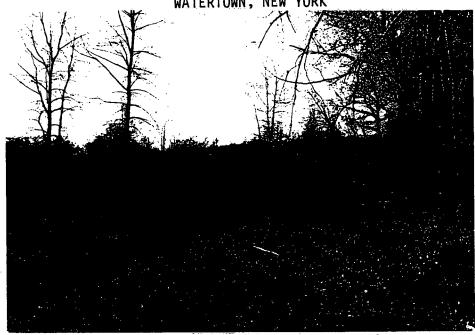
ALL PHOTOS TAKEN BY JANE BULLIS

Photo Number	<u>Description</u>	Time
1P-8	Facing north looking at landfill entrance.	1443
1P-10	Facing northwest looking at field adjacent to landfill.	1446
1P-16	Looking south down Purdy Ave. toward Pearl St.	1525
1P-17	From farm on Patterson Ave. looking west at NY Air Brake Co.dand Landfill.	1529
1P-18	Looking at stream from Patterson Ave., landfill in background.	1537



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NY AIR BRAKE LANDFILL WATERTOWN, NEW YORK



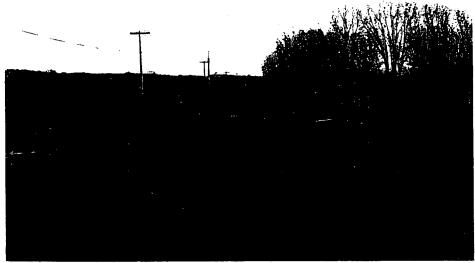
1P-8 November 20, 1987 1443 Facing north looking at landfill entrance.



1P-10 November 20, 1987 1446 Facing northwest looking at field adjacent to landfill.



NY AIR BRAKE LANDFILL WATERTOWN, NEW YORK



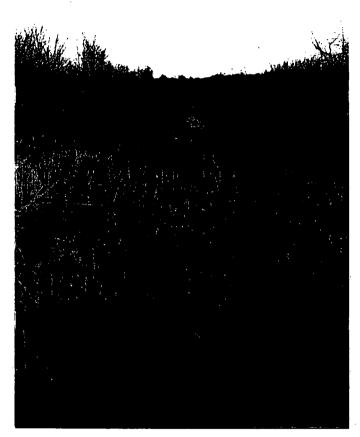
1P-16 November 20, 1987 1525 Looking south down Purdy Ave. toward Pearl St.



1P-17 November 20, 1987 1529
From farm on patterson Ave. looking west at NY Air Brake Co. and landfill.



NY AIR BRAKE LANDFILL WATERTOWN, NEW YORK



1P-18 November 20, 1987
Looking at stream from Patterson Ave., landfill in background.

APPENDIX B BACKGROUND INFORMATION

HISTORY OF WASTE DISPOSAL AND SITE DESCRIPTION

History:

The industrial landfill is situated entirely on New York Air Brake property in Watertown, New York, (Figure 1). The age of the landfill is indeterminent. NYAB has been in operation since 1902 but the date of the first use of the site is unknown. The history of landfill operations prior to 1970 is not documented. Between 1970 and 1977 150 thousand gallons of liquid were deposited at the site. The liquid disposal practice ceased in 1977. As of 1986 the site contained in excess of 300 thousand cubic yards of solid material.

Classification - The New York Air Brake landfill presently is classified as a 2a site on the Department of Environmental Conservation's list of <u>Inactive hazardous Waste Sites in New York State</u>. Class 2a is a temporary classification for sites too poorly documented to be otherwise classified. New York Air Brake has commissioned the present study to provide the data needed to classify the landfill.

The types and quantities of wastes disposed at the site are listed in Attachment 1 "Landfill Description and Content". Attachment 1 is based upon available records, and in the absence of such records, NYAB's best estimates. Attachment 1 is copied in part from the communication "Response to Request for Further Classification of Volumes and Types of Waste Deposited in NYAB's Landfill," Marcus A. Wuerschmidt to Darrell Sweredoski, August 12, 1986, (see Appendix D for full text).

Historical Inventory of Photos - NYAB available records contained an aerial photo from June 4, 1959. Non-photographic copies of three prints are included in Appendix B: Field Data. The second and third 1959 prints are approximately 1.7% and 4.3% enlargements of the first. In addition the site was flown on

April 14, 1987, generating six frames for analysis and topographic mapping. Non-photographic copies are in Appendix B: Field Data. All copies are supplied with and without lineament analysis overlays.

Site Description:

Topography - Topographic relief across the NYAB parcel is about forty feet; the land surface slopes generally westward toward Kelsey Creek. The landfill itself has relief of about thirty feet and covers about ten acres. It lies within the drainage basin of a main tributary to Kelsey Creek which, in turn, is a tributary to the Black River.

Bedrock - The area around the site is underlain by up to fifteen feet of stiff clays and silts. This unconsolidated sequence is underlain by carbonate bedrock of Middle Ordovician age which is exposed locally along drainage courses. The bedrock surface data presently available (Woodward Clyde Consultants, 1981; O'Brien & Gere, 1983, 1984) indicates that bedrock surface slopes west by northwest (Figure 2).

Seasonal Water Table - Based on the boring logs from 1982 (Appendix C) well installations ground-water occurs at the sediment-bedrock interface. Ground-water levels were measured in three (3) wells between 11/22/82 and 12/10/84. The observed gradient is westerly about 1/4 inch per foot (Figure 3).

The lowest water table elevation was observed on 10/18/84 at doen gradient well #2. The highest elevation was observed on 12/8/82. Figure 3 indicates seasonal ground-water level fluctuations ranging between three and eight feet.

Bedrock Structures - The influence of discordant structures such as joints and fracture zones upon ground-water movement are poorly defined. Identification and characterization of these features is a priority of the present work.

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PURPOSE AND SCOPE OF REPORT

The primary purpose of this report is to specify and locate monitor well couplets near the New York Air Brake Company (NYAB) "site" that will identify and measure any threat to the environment caused by disposal of industrial and hazardous wastes by NYAB at the "site".

The secondary purpose of this report is to submit for NYSDEC review (1) a history of waste disposal and site description

- (2) the results of previous sampling and analysis studies and
- (3) the Well Drilling and Installation Specifications for Subcontractors included as Appendix A.

A companion document "Health and Safety Manual for New York Air Brake Company" accompanies this "Well Justification Report" under separate cover.

Ject specifications Inactive site # 623003

PROJECT SPECIFICATIONS

- Task 1. Review aerial photographs of the area to identify existing fracture patterns in the bedrock.
- Task 2. On-site investigation to verify the conclusions of Task 1.
- Task 3. Based upon the results of Tasks 1 and 2, four groundwater monitoring well sites will be located. The placement of these wells will be one upgradient well and three downgradient wells. Should the facts justify additional wells, they will be placed as indicated.
- Task 4. Based upon Task 3, the groundwater monitoring wells will be installed. They are to be nested wells consisting of one shallow and one deep well. The shallow well will monitor groundwater in the unconsolidated deposits, while the deep well will monitor the groundwater in the upper portion of the limestone bedrock. These well nests will be installed in order that the groundwater flow and quality in the bedrock can be differentiated from the groundwater flow and quality in the unconsolidated deposits. All wells will be 2" I.D. PVC.
- Task 5. A hydrogeologic description of the area will be prepared based on Tasks 1 and 2 as well as data obtained from the groundwater monitoring wells. The well data will include but is not limited to water elevations, flow rates and flow patterns. Upon completion of this document and certification by a P.E., it will be presented to the NYSDEC for their review. Upon notification by the DEC that the well placement is satisfactory and that the upgradient well(s) are truly upgradient, the groundwater monitoring program will commence.
- Task 6. The groundwater monitoring program will consist of four sampling events. Samples will be obtained from all wells, both shallow and deep. These samples will be analyzed for all items listed on Attachment 1 during each sampling event; resulting in a water quality profile of both the deep and shallow wells on a well-by-well basis. In addition, during the first sampling event a EPA Priority Pollutants Analysis will be run on all wells, both shallow and deep.

Priority Pollutants Analysis as well as analysis of those items listed on Attachment 1 must follow all DEC and EPA specifications relevent to Groundwater Analysis, so that no analysis may come into question on legal grounds. Analysis reports will include but are not limited to raw data, data analysis, calculations, methodology (including legal sources and/or specifications) and chain-of-custody documentation. Additional specifications on Attachment 2.

Sampling Event Number 1 will include both priority pollutants and those items in Attachment 1 not covered by priority pollutants. No further sampling will be performed until the results of the first sampling event have been analyzed and the analysis has been reviewed by representatives of the New York Air Brake Company. Pending the results of this analysis, items may be added or deleted from Attachment 1.

The sampling events will take place during the following months: April, June, September and November. It is not necessary that these samples be taken in a single year but they must be taken in a continuous manner.

- Task 7. In-situ Permeability Test will be conducted on all wells to estimate hydraulic conductivity of the subsurface materials. In addition, laboratory permeability testing will be performed on downgradient samples to determine their hydraulic conductivity.
- Task 8. Following each sampling event and prior to the next sampling event, all analyses will be presented to representatives of the New York Air Brake Company for review. Upon receipt of the results of Sampling Event Number 4 and their review by the New York Air Brake Company, a report will be compiled by the vendor covering the following items but not limited to them:
 - 1. Hydrogeologic Review of the area including:
 - A. Written report.
 - B. Groundwater map, both topographic and section views of the topographic.
 - C. Topographic map of the surface elevations showing well placement.
 - D. Section view of each well construction including soil and rack representations and any other pertinent data.
 - Priority Pollutant Analysis including all items listed in Task 6.
 - 3. Groundwater Pollutant Analysis including all items listed in Task 6.

This report must be certified by a P.E. and drawing sizes should be such that they are easily readable. A draft report will be given to the New York Air Brake Company for review. After the review, a final report will be issued: the quantity to be determined at a later date.

ATTACHMENT 1

Groundwater Testing, Beyond Priority Pollutants

- 1. PH
- 2. Specific Conductance
- 3. Total Dissolved Solids
- 4. Total Organic Carbon

ATTACHMENT 2

- Note 1: The analysis for organics should be GC/MS with identification of all peaks beyond the priority pollutants which are greater than 10% of the nearest calibrating standard. Analysis must be in accordance with DEC's quality control and reporting requirements as adopted from the U.S. EPA Caucus Protocals from the Contract Laboratory Program.
- Note 2: The water quality standard which is to be used for testing and analytical purposes for material other than priority pollutants is Class GA as defined in the Official Codes, Rules and Regulations of the State of New York, Chapter X Division of Water Resources, Article 2, Parts 700, 701, 702, 703.
- Note 3: If the NYS Groundwater Standard is more stringent than the Priority Pollutant Standard, both standards should be listed on data analysis.



File 450 D. Sweredosti

New York State Department of Environmental Conservation

MEMORANDUM

TO: FROM: SUBJECT: Joseph L. Slack, Chief, Bureau of Eastern Remedial Action Frank T. Ricotta, Chief, Bureau of Hazardous Site Control New York Air Brake, #623003

DATE:

JAN 21 1988

Pursuant to your memorandum of November 13, 1987, the Bureau of Hazardous Site Control will be assuming responsibility for the current work. Martin Brand, of the Western Investigation Section, will be the contact for this site and should be copied on any future correspondence.

In the event this site is reclassified from Class 2a to Class 2 and the need for further investigation is identified, the lead responsibility will be transferred back to the Bureau of Eastern Remedial Action.

Attachment

cc: W. Demick

- S. Hammond
- N. Parratt
- M. Brand
- J. Swartwout
- D. Sweredoski, Region 6

RECEIVED

JAN 2 7 1988

NYS DEFY, LANGUAGEN CONSERVATION
REGION 6
REGIONAL ENGINEER

RECEIVED

FEB 0 5 PEC'D

NUS CORPORATION REGION II

SENT TO

New York State Department of Environmental Conservation

MEMORANDUM

TO: FROM: SUBJECT: Charles Goddard, Principal Sanitary Engineer, Bur. of Haz. Site Control Joseph L. Slack, Chief, Bureau of Eastern Remedial Action

New York Air Brake Site, #623003

DATE:

November 13, 1987

The Division of Environmental Enforcement has negotiated a Consent Order with New York Air Brake to conduct a field investigation at this site. The Consent Order has been signed and New York Air Brake is preparing to install five well pairs per the attached Well Justification Report. Region 6 and BERA have provided technical support to DEE during the development of the Field Investigation Work Plan and Well Justification Report.

During our just completed review of the Well Justification Report it was noted that this site is currently classified as 2a and that the field investigation approved in the Consent Order is essentially a Phase II Site Investigation, not a Remedial Investigation. In view of these facts, I feel it appropriate that the Bureau of Hazardous Site Control assume responsibility for oversight of the current work. It should be noted that Region 6 personnel expect to be available to cover a major portion of the field work which is scheduled to take place in November - December.

John Swartwout of Technical Support Section is currently in possession of the files and reports on this site and he can be contacted at 7-5637 regarding the transfer of these files to your staff.

S. Hammond cc:

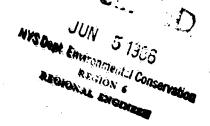
J. Swartwout

New York State Department of Environmental Conservation

MEMORANDUM

TO: FROM: SUBJECT: DATE: David Engel
Mark Millspaugh
New York Air Brake

June 2, 1986



I have reviewed New York Air Brake's (NYAB) response to your March 11, 1986 "any and all" letter. I also forwarded a copy of the NYAB response to Darrell Sweredoski for his input. Our comments are as follows:

- 1. Scott M. Turner's April 14th letter provides much of the information you requested concerning "hazardous wastes" as defined by 6NYCRR 371. Mr. Turner was very careful to limit his response to only the handling and disposal of "hazardous wastes". Mr. Turner makes specific reference that the Department's authority under Article 27, Title 13 pertains only to hazardous waste. He establishes this as the basis for not answering your questions regarding industrial wastes, petroleum products and industrial chemicals. However, many of the industrial chemicals listed in your letter are hazardous wastes when spilled, dumped or disposed of. Further, the petroleum products and other wastes listed in your letter are regulated industrial/commercial wastes.
- 2. Many "large and extensive" documents are not provided with NYAB's response, however Mr. Turner agrees to make all such records available for our inspection at NYAB's office upon reasonable notice. Such documents would include floor plans, blueprints, diagrams, construction plans, specifications, as-built drawings, etc.
- 3. Attachment 1 to Nr. Turner's letter consists of a completed "Notification of Hazardous Waste Site" forms submitted by NYAB to the USEPA in June 1981 on which NYAB reports that 500,000 gallons of liquid hazardous waste and 20 drums of hazardous waste were disposed of on-site between 1970 and 1977. These wastes were identified to be comprised of organics, inorganics, solvents, heavy metals, acids and bases. NYAB reported that wastes were comprised of the following USEPA hazardous waste codes:

F001	K061	U134	U210	D000
F007	P020	U140	U220	D006
F008	P029	U154	U228	D007
F009	P030	U159	U239	D008

F010 U002 U160 D001

roll vol3 v165 D002

Paragraph No. 2 of Mr. Turner's letter attempts to downplay the 500,000 gallon estimate and states that it is NYAB's position that this estimate is "not accurate".

It has been my experience, however that when firms respond to USEPA, the total qualities are not "worst case" estimates but rather a minimum estimate. The 500,000 gallon estimate over the 1970 to 1977 period breaks down to 62,500 gallons per year. This does not seem unreasonable.

4. The "Community Right-to-Know" response presented as part of Attachment 2 to Mr. Turner's letter confirms that from 1970 to 1977, 24.5 tons of ignitable liquid waste, 7 tons of corrosive liquid, 14 tons of trichloroethlene and perchloroethylene, 3.5 tons of cyanide plating solution, 1.4 tons of cyanide plating sludges, 34.4 tons of stripping and cleaning solutions containing cyanide, 2.09 tons of heat treat sludge containing cyanide, 0.7 tons of spent cyanide salts from heat treating, 3.5 tons of sodium cyanide salts, 2.1 tons of toluene, 7 tons of trichloroethylene, 2.1 tons of xylene, and various avmounts of acetone, benzene, hydrofluoric acid, isobutyl alcohol methanol, methy ethyl ketone peroxide, naphthalene and tetrachloroethylene were all disposed of at the on-site landfill. The resulting total of hazardous waste disposed of on-site exceeds 102 tons.

In any event, it is clear that NYAB disposed significant quantitites of hazardous waste in landfill. It is also reasonable to assume that large quantities of industrial/commercial (non-hazardous) wastes were also disposed of.

Attachment 3 to Mr. Turner's letter is entitled, "Preliminary Hydrogeological Evaluation Industrial Waste Landfill, Watertown, NY" and is dated June 19, 1981. This Report identifies two additional hazardous waste disposal areas at the site as follows:

- 1. Old disposal site outside the east gate.
- 2. Sides of landfill access road.

In conclusion, a thorough investigation of the NYAB facility including the landfill is appropriate. Our standard RI/FS order would provide for an acceptable investigation.

- cc: D. Sweredoski /
 - J. Iannotti
 - V. Bryant

MPM/rs

Code:_ Site Code: <u>6230</u>			<i></i>	
County: Jeffe	w York Air Br erson Starbuck Av	Town/C	Region: ity Watertown	
Status of Site :	Narrative:			
granuar waste,	also received her areas at the	large quantitie	sal of foundry sand s of liquid industria Brake site received	il waste
			•	•
•				
		. *		
	· .			
				•
	•			•
	Cpen Dump Landfill Structure 5A	Treatment Pon Lagoon(s)		of Pondsof Lagoons
Rezerdous Weste	No. 1. D. Article and Co.	Confirmed D	Suspected 😥	24
*Type and Quant	ity of Hazardous	Wastes:		· · · · · · · · · · · · · · · · · · ·
TYPE	•	•	• • • • • • • • • • • • • • • • • • • •	ounds, drums, ons, gallons)
Coundry sand	phenolic and is	mjanate binder	7 270 000 gallons	
foundry dust fr	om shot blast ar	nd air		·
	ol devices, acid			
oils including v	v metal wastes.	solvents,	270,000 gallons/v	rear up untill 377
waste paint filt			1.1 ton/year	
-734 WEETERAUST	SHEETS II MOTE	share is reserve	•	

Name of Current Owner of Site: New York	Air Brake		
Address of Current Owner of Sits: Starbu	ick Avenue. Watert	own, NY 13601	
			. 6.
Time Period Site Was Used for Hazardous W	· · · · · · · · · · · · · · · · · · ·		· Gr
	Present	. 1980	
Is site Active Active Inactive Inactive Inactive if hazardous wastes were was closed prior to August 25, 1979)	e disposed of at thi	s site and site	
Types of Samples: Air Groundwater Surface Water Soil	None 🗇		
Remedial Action: Proposed Und NONE In Progress Nature of Action:	er Design = Completed =		
Status of Legal Action: NONE	State	Federal 🗇	
Permits Issued: Federal Local G Solid Waste Min	Sovernment	PDÉS 🔲 Lands 💭 Other	e 🖅(AIR
Assessment of Environmental Problems:			
			•
Minimal contamination was noted from contamination is unknown. The file in			
community and the first in	idicases reachase bi	oolems in pasti.	,
·	•		
			J.'*.
Assessment of Health Problems:		·	
None known.			
er de gradigene grangen ik dipplica troppen i filosofie en beste filosofie en beste en en en en en en en en en			
and the second of the second o			
Persons Completing this Form:			
D.Swasadoski	Ren Tram	ontrino	
The water and the contract of			The same same
D. Knowles			<u>Tab</u> a wa
D. Knowles	New Mark 5-2-2	enartment of Wes	Stan
D. Knowles New York State Department of Environ- mental Conservation	New York State	Separtment of Hea	il on
D. Knowles New York State Department of Environ-	New York State :	Pepartment of Mea	i ta

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION DIVISION OF SOLID AND HAZARDOUS WASTE

INACTIVE HAZARDOUS WASTE DISPOSAL SITE REPORT

PRIORITY CODE: NAME OF SITE: STREET ADDRESS: Startuck TOWN/CITY: Lifa fectors	•
NAME OF CURRENT OWNER OF SITE:	· · · · · · · · · · · · · · · · · · ·
TYPE OF SITE: OPEN DUMP LANDFILL	STRUCTURE LAGOON LAGOON TREATMENT POND
ESTIMATED SIZE: 5 ACRES	
of toundry some and and foundry wastes. So in this area in the	ofter machine shap and wents had been champed be past.

HAZARDOUS WASTE DISPOSED: CONFIRMED	SUSPECTED 🔀
TYPE AND QUANTITY OF HAZARDOUS WASTES DISPOSED:	QUANTITY (POUNDS, DRUMS, GALLONS)
Founday sime with various	of family sand
grinding dest, and and	up to 270 ood / year of
cils_	liqued works
	BACE

TIME PERIOD SITE WAS USED FOR HAZARDOL	US WASTE DISPOSAL:
unknown, 19	TO
OWNER(S) DURING PERIOD OF USE:	N. Y. An Brake
SITE OPERATOR DURING PERIOD OF USE:	gan.
ADDRESS OF SITE OPERATOR:	Same
ANALYTICAL DATA AVAILABLE: AIR SOIL	SURFACE WATER GROUNDWATER SEDIMENT NONE NONE
CONTRAVENTION OF STANDARDS: GROUNDW SURFACE	WATER DRINKING WATER AIR DRINKING WATER
SOIL TYPE: Here over him. DEPTH TO GROUNDWATER TABLE:	unknown
STATUS: IN PROGRESS TO PROPOSED IN PROGRESS TO NATURE OF ACTION:	STATE FEDERAL COMPLETED COMPLETED COMPLETED COMPLETED COMPLETED
ASSESSMENT OF ENVIRONMENTAL PROBLEMS: testing of substantie revealed to substantie conteminates present.	I amount of hazardous
ASSESSMENT OF HEALTH PROBLEMS:	
•	
PERSON(S) COMPLETING THIS FORM: NEW YORK STATE DEPARTMENT OF FRATRONMENTAL CONSERVATION	NEW YORK STATE DEPARTMENT OF HEALTH
NAME Donnell Sugresofti	NAME
TITLE San kong Engineer	TITLE
NAME	NAME
TITLE	TITLE
DATE: //- 3-83	DATE:

PAGE

ANALYTICAL RESULTS

Prepared For

Lozier 600 Perinton Hills Fairport, New York 14450

Prepared By

Recra Environmental, Inc. 10 Hazelwood Drive, Suite 106 Amherst, New York 14150

METHODOLOGIES

The specific methodologies employed in obtaining the enclosed analytical results are in accordance with U.S. Environmental Protection Agency protocol.

COMMENTS

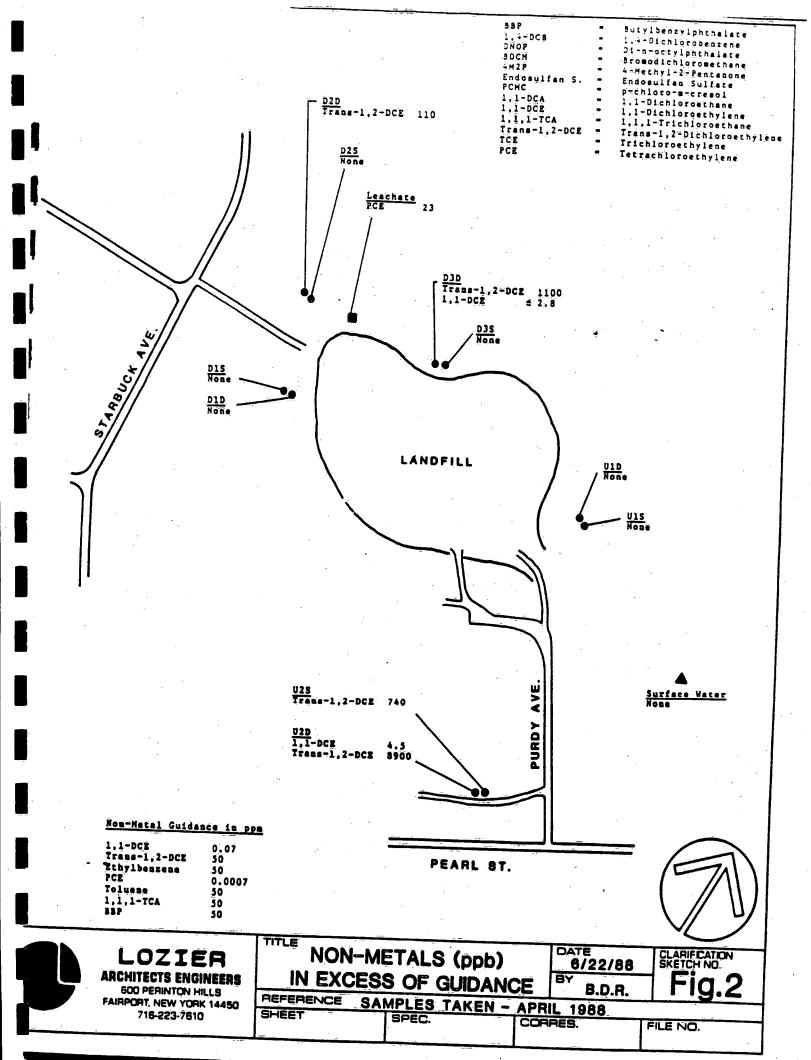
Comments pertain to data on one or all pages of this report.

Analyses were sub-contracted by Recra Environmental, Inc.

The values reported as "less than" (<) indicate the working detection limit for the particular sample and/or parameter.

Parameters reported as soluble were filtered through a 0.45 μm filter





AQUEOUS MATRIX TOTAL METALS

PARAMETER	SAMPLE IDENTIFICATION					
(Units of Measure = mg/l)	Dld	D2d	D3d	01		
Total Aluminum Total Antimony Total Arsenic Total Barium Total Beryllium Total Cadmium Total Calcium Total Chromium Total Cobalt Total Copper Total Iron Total Lead Total Magnesium Total Manganese Total Mercury Total Nickel Total Selenium Total Silver Total Sodium Total Thallium Total Total Copper	0.54 <0.06 <0.005 0.066 <0.002 <0.005 64 <0.01 <0.01 <0.01 0.61 <0.005 25 0.038 <0.0004 <0.02 20 <0.005 <0.01 26 <0.005 <0.01 0.057	9.4 <0.06 <0.005 0.22 <0.005 80 0.020 <0.01 <0.01 20 0.0080 28 8.3 <0.0004 0.029 14 <0.005 <0.01 83 <0.005 <0.01 0.046	25 <0.06 <0.005 0.39 <0.002 <0.005 140 0.11 0.020 0.047 40 0.033 32 1.1 <0.0004 0.45 13 <0.005 <0.005 <0.01 37 <0.005 0.040 0.14	01s 25 <0.06 <0.005 0.30 <0.002 <0.005 98 0.031 <0.01 0.021 29 0.012 -0.78 <0.004 0.040 7.9 <0.005 <0.01 14 <0.005 0.039 0.098		



AQUEOUS MATRIX TOTAL METALS

PARAMETER	SAMPLE IDENTIFICATION					
(Units of Measure = mg/1)	D2s	D3s	Uld	1124		
Total Aluminum Total Antimony Total Arsenic Total Barium Total Beryllium Total Cadmium Total Calcium Total Chromium Total Cobalt Total Copper Total Iron Total Lead Total Magnesium Total Manganese Total Mercury Total Nickel Total Potassium Total Selenium Total Sodium Total Sodium Total Thallium Total Thallium Total Tinc	13 <0.06 <0.005 0.19 <0.002 <0.005 100 0.077 <0.01 0.017 17 0.016 26 2.9 <0.0004 0.12 13 <0.005 <0.01 37 <0.005 0.017 0.064	2.7 <0.06 <0.005 0.068 <0.002 <0.005 98 0.029 <0.01 <0.01 3.6 <0.005 35 0.88 <0.0004 0.031 1.4 <0.005 <0.01 27 <0.005 <0.01	0.89 <0.06 <0.005 0.045 <0.002 <0.005 46 0.023 0.024 <0.01 1.4 0.0060 28 0.028 <0.004 <0.02 19 <0.005 <0.01 38 <0.005 <0.01 0.023	0.1 <0.06 <0.005 0.12 <0.002 <0.005 97 <0.01 <0.01 <0.01 1.3 <0.005 53 0.87 <0.004 <0.02 7.6 <0.005 <0.01 18 <0.005 <0.01 0.01 0.01		

AQUEOUS MATRIX TOTAL METALS

PARAMETER (Units of Measure = mg/l)	SAMPLE IDENTIFICATION			
	U1s	U2s	U-SURFACE	LEACHATE
Total Aluminum Total Antimony Total Arsenic Total Barium Total Beryllium Total Cadmium Total Calcium Total Chromium Total Cobalt Total Copper Total Iron Total Lead Total Magnesium Total Manganese Total Mercury Total Nickel Total Potassium Total Selenium Total Sodium Total Sodium Total Thallium Total Vanadium Total Zinc	58 <0.06 0.0050 0.61 <0.002 <0.005 170 0.079 0.030 0.084 87 0.038 64 2.0 <0.0004 0.10 14 <0.005 <0.01 21 <0.005 <0.01 0.25	35 <0.06 <0.005 0.42 <0.002 <0.005 220 0.086 0.025 0.062 55 0.024 93 2.1 <0.0004 0.13 18 <0.005 <0.01 24 <0.005 0.069 0.18	0.17 <0.06 <0.005 0.026 <0.002 <0.005 48 <0.01 <0.01 <0.01 0.44 <0.005 6.0 0.070 <0.0004 <0.002 9.0 <0.005 <0.01 8.2 <0.005 <0.01 0.032	18 <0.06 <0.005 1.7 <0.002 0.012 100 0.021 0.021 0.044 200 0.046 31 2.6 <0.0004 0.064 24 <0.005 <0.01 130 <0.005 <0.01 0.13

AQUEOUS MATRIX SOLUBLE METALS

	SAMPLE IDENTIFICATION			
PARAMETER (Units of Measure <u>= mg/l)</u>	Dld	D2d	D3d	Dls
Soluble Aluminum	<0.1	<0.1	<0.01	<0.01
Soluble Antimony	<0.06	<0.06	<0.06	<0.06
Soluble Arsenic	<0.005	<0.005	<0.005	<0.005
Soluble Barium	0.028	0.19	0.12	0.059
Soluble Beryllium	<0.002	<0.002	<0.002	<0.002
Soluble Cadmium	<0.005	<0.005	<0.005	<0.005
Soluble Calcium	24	73	97	77
Soluble Chromium	<0.01	<0.01	<0.01	0.010
Soluble Cobalt	<0.01	<0.01	<0.01	<0.01
Soluble Copper	<0.01	<0.01	<0.01	<0.01
Soluble Iron	<0.03	2.0	2.2	<0.03
Soluble Lead	<0.005	<0.005	<0.005	<0.005
Soluble Magnesium	31	25	26	
Soluble Manganese	0.056	7.8	0.57	0.19
Soluble Mercury	<0.0004	<0.0004	<0.0004	<0.0004
Soluble Nickel	<0.02	0.020	0.079	<0.02
Soluble Potassium	18	12	5.6	0.97
Soluble Selenium	<0.005	<0.005	<0.005	<0.005
Soluble Silver	<0.01	<0.01	<0.01	<0.01
Soluble Sodium	26	81	36	13
Soluble Thallium	<0.005	<0.005	<0.005	<0.005
Soluble Vanadium	<0.01	<0.01	<0.01	<0.01
Soluble Zinc	<0.01	0.036	0.050	<0.01

AQUEOUS MATRIX SOLUBLE METALS

PARAMETER			NTIFICATION	
(Units of Measure = mg/l)	D2s	D3s	Uld	U2d
Soluble Aluminum Soluble Antimony Soluble Arsenic Soluble Barium Soluble Beryllium Soluble Cadmium Soluble Chromium Soluble Cobalt Soluble Copper Soluble Iron Soluble Hagnesium Soluble Manganese Soluble Mercury Soluble Nickel Soluble Potassium Soluble Selenium Soluble Silver Soluble Sodium Soluble Thallium Soluble Zinc	<pre><0.01 <0.06 <0.005 0.13 <0.002 <0.005 100 <0.01 <0.01 <0.01 <0.01 0.034 <0.005 21 2.4 <0.0004 0.044 9.4 <0.005 <0.01 35 <0.005 <0.01 0.031</pre>	<pre><0.01 <0.06 <0.005 0.076 <0.002 <0.005 120 <0.01 <0.01 <0.03 <0.005 35 0.85 <0.0004 <0.02 0.78 <0.005 <0.01 27 <0.005 <0.01 0.021</pre>	<pre><0.01 <0.06 <0.005 0.039 <0.002 <0.005 45 <0.01 <0.01 <0.01 0.032 <0.005 28 0.012 <0.0004 <0.02 20 <0.005 <0.01 38 <0.005 <0.01 0.016</pre>	<pre></pre>

AQUEOUS MATRIX SOLUBLE METALS

PÄRAMETER		SAMPLE ID	ENTIFICATION	
(Units of Measure = mg/l)	U1s	U2s	U-SURFACE	LEACHATE
Soluble Aluminum Soluble Antimony Soluble Arsenic Soluble Barium Soluble Beryllium Soluble Cadmium Soluble Chromium Soluble Cobalt Soluble Copper Soluble Iron Soluble Hagnesium Soluble Magnesium Soluble Mercury Soluble Mickel Soluble Potassium Soluble Selenium Soluble Soluble Soluble Soluble Soluble Soluble Solum Soluble Jiver	<0.01 <0.06 <0.005 0.12 <0.002 <0.005 100 <0.01 <0.01 <0.038 <0.005 32 0.41 <0.0004 0.022 0.83 <0.005 <0.01 16 <0.005 <0.01 0.069	<0.01 <0.06 <0.005 0.11 <0.002 <0.005 140 <0.01 <0.01 <0.01 <0.03 <0.005 61 0.69 <0.0004 0.029 7.4 <0.005 <0.01 20 <0.005	<0.01 <0.06 <0.005 0.035 <0.002 <0.005 53 <0.01 <0.01 <0.01 0.057 <0.005 5.7 0.0070 <0.0004 <0.02 8.9 <0.005 <0.01 6.7 <0.005 <0.01 <0.01	<0.01 <0.06 <0.005 0.92 <0.005 68 <0.01 <0.01 <0.01 2.9 <0.005 26 1.2 <0.004 0.036 22 <0.005 <0.01 170 <0.005 <0.01 0.037



QUALITY CONTROL INFORMATION - PRECISION AQUEOUS MATRIX TOTAL METALS

PARAMETER (Units of Measure = mg/l)	SAMPLE IDENTIFICATION	VALUE 1	VALUE 2	MEAN.	STANDARD DEVIATION
	:no-4	<0.1	<0.1	<0.1	· •
Total Aluminum	U2d	<0.06	<0.06	<0.06	-
Total Antimony		<0.005	<0.005	<0.005	<u>.</u> .
Total Arsenic	Î	0.12	0.12	0.12	0
Total Barium			<0.002	<0.002	_
Total Beryllium		<0.002	<0.002	<0.005	<u>-</u>
Total Cadmium		<0.005		100	0
Total Calcium	•	100	100	<0.01	. 0
Total Chromium	·	<0.01	0.018		
Total Cobalt		<0.01	<0.01	<0.01	: : - !
Total Copper		<0.01	<0.01	<0.01	. 0
Total Iron		1.5	1.5	1.5	.0
Total Lead	·	<0.005	<0.005	<0.005	0
Total Magnesium		55	55	55	_
Total Manganese		0.93	0.92	0.93	0.0071
Total Mercury		<0.0004	<0.0004	<0.0004	-
Total Nickel		<0.02	<0.02	<0.02	
Total Potassium		8.5	8.5	8.5	0
Total Selenium		<0.005	<0.005	<0.005	-
Total Silver		<0.01	<0.01	<0.01	-
Total Sodium	F	19	20	20	0.71
		<0.005	<0.005	<0.005	•
Total Thallium		<0.01	<0.01	<0.01	-: '
Total Vanadium		0.020	0.018	0.019	0.0014
Total Zinc	1	"""	1		



QUALITY CONTROL INFORMATION - PRECISION AQUEOUS MATRIX SOLUBLE METALS

COMPOUND	SAMPLE	VALUE	VALUE	MEAN	STANDARD
(Units of Measure = mg/l)	IDENTIFICATION	1	2		DEVIATION
Soluble Aluminum Soluble Antimony Soluble Arsenic Soluble Barium Soluble Beryllium Soluble Cadmium Soluble Chromium Soluble Copper Soluble Iron Soluble Lead Soluble Magnesium Soluble Mickel Soluble Potassium Soluble Thallium Soluble Vanadium Soluble Zinc	U-SURFACE	<0.1 <0.06 <0.005 0.035 <0.002 <0.005 53 <0.01 <0.01 <0.01 0.057 <0.005 5.7 0.0070 <0.02 8.9 <0.01 6.7 <0.005 <0.01 <0.01 <0.01	<0.1 <0.06 <0.005 0.036 <0.002 <0.005 55 <0.01 <0.01 0.058 <0.005 6.0	<0.1 <0.06 <0.005 0.036 <0.002 <0.005 54 <0.01 <0.01 0.058 <0.005 5.9 0.0070 <0.02 9.0 <0.01 6.9 <0.005 <0.01 <0.01	0.00071 1.4 - 0.00071 0.21 0.071 0.28

QUALITY CONTROL INFORMATION - ACCURACY AQUEOUS MATRIX SOLUBLE METALS

COMPOUND	SAMPLE IDENTIFICATION	mg/l OF SPIKE	PERCENT RECOVERY
Soluble Aluminum Soluble Antimony Soluble Arsenic Soluble Barium Soluble Beryllium Soluble Cadmium Soluble Chromium Soluble Copper Soluble Copper Soluble Iron Soluble Lead Soluble Manganese Soluble Nickel Soluble Silver Soluble Tin Soluble Vanadium Soluble Zinc	U-SURFACE	2.0 0.50 0.040 2.0 0.050 0.050 0.20 0.50 0.50 0.50 0.	101 92 110 100 104 104 100 97 100 106 86 98 101 86 114 100 113

ANALYTICAL RESULTS

Prepared For

Lozier 600 Perinton Hills Fairport, New York 14450

Prepared By

Recra Environmental, Inc. 10 Hazelwood Drive, Suite 106 Amherst, New York 14150

METHODOLOGIES

The specific methodologies employed in obtaining the enclosed analytical results are indicated on the specific data table. The method numbers presented refer to one of the following U.S. Environmental Protection Agency references unless noted otherwise in this report.

- OFR Part 136 "Guidelines Establishing Test Procedures for the Analysis of Pollutants Under the Clean Water Act" October 26, 1984 (Federal Register) U.S. Environmental Protection Agency.
- U.S. Environmental Protection Agency "Test Methods for Evaluating Solid Waste - Physical/Chemical Methods". Office of Solid Waste and Emergency Response. July 1982, SW-846, Second Edition.

COMMENTS

Comments pertain to data on one or all pages of this report.

The values reported as "less than" (<) indicate the working detection limit for the particular sample and/or parameter.

The values reported as "less than or equal to" (\leq) indicate the compound may be present at trace levels relative to the detection limit but not subject to accurate quantification.

Total Organic Carbon results may not include volatile constituents since the sample was purged with an inert gas prior to analysis.

Results of the analysis of Pesticide/PCB's are based on the matching of retention times between samples and standards on a single gas chromatographic column.

Insufficient sample volume was avialable to perform all requested water quality analyses on sample D2s and U1d.





RECRA ENVIRONMENTAL, INC.

Chemical Waste Analysis, Prevention and Control

June 6. 1988

Mr. Robert Ramsey Lozier 600 Perinton Hills Fairport, NY 14450

Re: Analytical Results

Dear Mr. Ramsey:

Please find enclosed results concerning the analyses of the samples recently collected by Recra Environmental, Inc. on your behalf.

The Field Report pertaining to the enclosed data has been previously submitted with Recra's original report, I.D. 88-644, dated June 2, 1988.

Pertinent Information:

Quote #: Q88-275

Matrix: Âqueous

Samples Received: 4/23/88

Sample Dates: 4/19-4/22/88

If you have any questions concerning these data, do not hesitate to contact our Customer Service Representative at (716) 691-2600.

Sincerely.

RECRA ENVIRONMENTAL, INC.

ak Bhattacharya /dyt

Arun K. Bhattacharya, Ph.D. Senior Vice President/ Laboratory Director

KEK/AKB/ndc Enclosure

cc: Mr. Robert Ramsey

RECEIVED

JUN - 8 1988

I.D. #88-644A #8C1248

LOZIER ARCHITECTS/ENGINEERS

AQUEOUS MATRIX
METHOD 8240 - HAZARDOUS SUBSTANCE LIST VOLATILE ORGANICS

METHOD 8240 - INC.	SAM	PLE IDENTIFICATION	N
COMPOUND (Units of Measure = μg/l)	U-Surface	Leachate	Trip Blank
Acetone Benzene Bromodichloromethane Bromomethane 2-Butanone Carbon disulfide Carbon tetrachloride Chlorobenzene Chloroethane 2-Chloroethylvinyl ether Chloroform Chloromethane Dibromochloromethane 1,1-Dichloroethane 1,2-Dichloroethylene trans-1,2-Dichloroethylene trans-1,2-Dichloropropene trans-1,3-Dichloropropene trans-1,3-Dichloropropene Ethylbenzene 2-Hexanone Methylene chloride 4-Methyl-2-pentanone Styrene 1,1,2,2-Tetrachloroethane Toluene 1,1,1-Trichloroethane Toluene 1,1,1-Trichloroethane Trichloroethylene Vinyl acetate Vinyl chloride Total Xylenes	<10 <4.4 <2.2 <4.7 <10 <10 <5.0 <2.8 <6.0 <10 <1.6 <10 <3.1 <4.7 <2.8 <2.8 <1.6 <6.0 <5.0 <5.0 <7.2 <10 <2.8 <10 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.	<10 5.6 <2.2 <4.7 <10 <10 <5.0 <2.8 <6.0 <10 <1.6 <10 <3.1 <4.7 <7.8 <2.8 240 <6.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <12 <10 <2.8 <10 <5.0 <5.0 <5.0 <10 <4.7 <7.4 <5.0 200 <10 41 <5.0	<10 <4.4 <2.2 <4.7 <10 <10 <5.0 <5.0 <2.8 <6.0 <10 <1.6 <10 <3.1 <4.7 <2.8 <2.8 <1.6 <6.0 <5.0 <5.0 <7.2 <10 <2.8 <10 <5.0 <7.2 <10 <2.8 <10 <5.0 <5.0 <5.0 <7.2 <10 <2.8 <10 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.



AQUEOUS MATRIX
METHOD 8240 - HAZARDOUS SUBSTANCE LIST VOLATILE ORGANICS

1,2-Dichloropropane <6.0 <6.0 <6.0 cis-1,3-Dichloropropene <5.0 <5.0 <5.0	COMPONENT	S/	AMPLE IDENTIFICA	ION
Benzene <4.4 <4.4 <4.4 Bromodichloromethane <2.2 <2.2 <2.2 Bromoform <4.7 <4.7 <4.7 Bromomethane <10 <10 <10 2-Butanone <10 <10 <10 Carbon disulfide <5.0 <5.0 <5.0 Carbon tetrachloride <2.8 <2.8 <2.8 Chlorobenzene <6.0 <6.0 <6.0 Chlorobenzene <6.0 <6.0 <6.0 Chloroethane <10 <10 <10 2-Chloroethylvinyl ether <1.6 <1.6 <1.6 Chloromethane <1.0 <10 <10 Chloromethane <3.1 <3.1 <3.1 1,1-Dichloroethane <4.7 <4.7 <4.7 1,2-Dichloroethylene <2.8 <2.8 <2.8 1,1-Dichloropropane <6.0 <6.0 <6.0 <5.0 <5.0 <5.0		D1d	D2d	D3d
Ethylbenzene <7.2	Acetone Benzene Bromodichloromethane Bromoform Bromomethane 2-Butanone Carbon disulfide Carbon tetrachloride Chlorobenzene Chloroethane 2-Chloroethylvinyl ether Chloroform Chloromethane Dibromochloromethane 1,1-Dichloroethane 1,2-Dichloroethylene trans-1,2-Dichloropropene trans-1,2-Dichloropropene trans-1,3-Dichloropropene trans-1,3-Dichloropropene Ethylbenzene 2-Hexanone Methylene chloride 4-Methyl-2-pentanone Styrene 1,1,2,2-Tetrachloroethane Tetrachloroethylene Toluene 1,1,1-Trichloroethane 1,1,2-Trichloroethane Trichloroethylene Trichloroethylene	250 <4.4 <2.2 <4.7 <10 <5.0 <5.0 <1.6 <1.6 <1.0 <3.1 <4.7 <2.8 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <7.2 <10 <2.8 <10 <5.0 <1.9	280 <4.4 <2.2 <4.7 <10 <10 <5.0 <2.8 <6.0 <10 <1.6 <10 <3.1 <4.7 <2.8 <2.8 <110 <6.0 <5.0 <5.0 <7.2 <10 <2.8 <10 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.	150 <4.4 <2.2 <4.7 <10 <10 <5.0 <2.8 <6.0 <10 <1.6 <10 <21.6 <10 <3.1 <4.7 <2.8 <1,100 <6.0 <5.0 <5.0 <7.2 <10 <2.8 <10 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.



I.D. #88-644

AQUEOUS MATRIX
METHOD 8240 - HAZARDOUS SUBSTANCE LIST VOLATILE ORGANICS

ADDITIONAL	SA	MPLE IDENTIFICAT	ION
SAMPLE INFORMATION	D1d	D2d	D3d
Analysis Date Internal Standards Level Added = 50 µg/1	4/27/88	4/27/88	4/27/88
Bromochloromethane 1,4-Difluorobenzene Chlorobenzene-D5	103 108 105	131 129 126	102 105 103
Surrogates Level Added = 50 µg/l (% Recovery) 4-Bromof Luorobenzene 1,2-Dichloroethane-D4 Toluene-D8	99 96 114	88 90 115	112 105 129

AQUEOUS MATRIX
METHOD 8240 - HAZARDOUS SUBSTANCE LIST VOLATILE ORGANICS

COMPOUND		SAMPLE IDENTIFICA	TION
COMPOUND (Units of Measure = μg/1)	Dls	D2s	D3s
Acetone	<10	<10	270
Benzene	<4.4	<4.4	<4.4
Bromodichloromethane	<2.2	<2.2	<2.2
Bromoform	<4.7	₹4.7	<4.7
Bromomethane	<10	<10	<10
2-Butanone	<10	<10	<10
Carbon disulfide	<5.0	<5.0	<5.0
Carbon tetrachloride	<2.8	<2.8	<2.8
Chlorobenzene	<6.0	<6.0	<6.0
Chloroethane	<10	<10	<10
2-Chloroethylvinyl ether	<10	<10	<10
Chloroform	<1.6	2.3	1.7
Chloromethane	<10	<10	<10
Dibromochloromethane	<3.1	<3.1	⟨3.1
1,1-Dichloroethane	<4.7	<4.7	<4.7
1,2-Dichloroethane	<2.8	<2.8	<2.8
1,1-Dichloroethylene	<2.8	<2.8	₹2.8
trans-1,2-Dichloroethylene	<1.6	8.4	13
1,2-Dichloropropane	<6.0	<6.0	<6.0
cis-1,3-Dichloropropene	<5.0	<5.0	₹5.0
trans-1,3-Dichloropropene	<5.0	<5.0	<5.0
Ethylbenzene	<7.2	<7.2	<7.2
2-Hexanone	<10	<10	<10
Methylene chloride	<2.8	4.3	<2.8
4-Methyl-2-pentanone	<10	<10	<10
Styrene	<5.0	<5.0	<5.0
1,1,2,2-Tetrachloroethane	<6.9	<6.9	<6.9
Tetrachloroethylene	<4.1	<4.1	<4.1
Toluene	<6.0	₹6.0	<6.0
1,1,1-Trichloroethane	<3.8	<3.8	<3.8
1,1,2-Trichloroethane	<5.0	< 5.0	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\
Trichloroethylene	<1.9	7.8	3.5
Vinyl acetate	<10	<10	<10
Vinyl chloride	<10	<10	<10
Total Xylenes	<5.0	<5.0	<5.0
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I.D. #88-644

ENVIRONMENTAL, INC

AQUEOUS MATRIX
METHOD 8240 - HAZARDOUS SUBSTANCE LIST VOLATILE ORGANICS

	SA	MPLE IDENTIFICAT	ION
ADDITIONAL SAMPLE INFORMATION	D1s	D2s	D3s
alysis Date dernal Standards del Added = 50 µg/l Recovery) comochloromethane 4-Difluorobenzene llorobenzene-D5	4/27/88 99 106 102	4/27/88 109 114 108	4/27/88 105 111 109
rogates rel Added = 50 µg/l Recovery) Bromofluorobenzene 2-Dichloroethane-D ₄ luene-D ₈	106 105 120	111 108 134	103 105 113
	lysis Date ernal Standards el Added = 50 µg/l Recovery) omochloromethane 4-Difluorobenzene lorobenzene-D5 rogates el Added = 50 µg/l Recovery) cromofluorobenzene 2-Dichloroethane-D4	ADDITIONAL SAMPLE INFORMATION Tysis Date ernal Standards el Added = 50 µg/l Recovery) comochloromethane 4-Difluorobenzene 106 107 108 109 1006 1007 1006 1007 1006 1007 1006 1007 1006 1007 1006 1007 1006 1007 1006 1007 1006 1007 1006 1007 1006 1007 1006 1007 1006 1007 1006 1007 1006 1007 1006 1007 1006 1007 1006 1006	ADDITIONAL SAMPLE INFORMATION D1s D2s lysis Date ernal Standards el Added = 50 µg/l Recovery) comochloromethane 4-Difluorobenzene 106 114 110robenzene-D5 rogates el Added = 50 µg/l Recovery) cromofluorobenzene 106 111 Recovery)

AQUEOUS MATRIX
METHOD 8240 - HAZARDOUS SUBSTANCE LIST VOLATILE ORGANICS

COMPOUND	SAMPLE ID	ENTIFICATION
(Units of Measure = µg/l)	U1d	U2d
COMPOUND (Units of Measure = µg/l) Acetone Benzene Bromodichloromethane Bromomethane 2-Butanone Carbon disulfide Carbon tetrachloride Chlorobenzene Chloroethane 2-Chloroethylvinyl ether Chloromethane Dibromochloromethane 1,1-Dichloroethane 1,2-Dichloroethylene trans-1,2-Dichloropropane cis-1,3-Dichloropropane cis-1,3-Dichloropropene trans-1,3-Dichloropropene Ethylbenzene 2-Hexanone Methylene chloride 4-Methyl-2-pentanone Styrene 1,1,2,2-Tetrachloroethane Tetrachloroethylene Toluene 1,1,1-Trichloroethane 1,1,2-Trichloroethane Trichloroethylene Vinyl acetate Vinyl chloride Total Xylenes		U2d <10 <4.4 <2.2 <4.7 <10 <10 <5.0 <2.8 <6.0 <10 <1.6 <10 <3.1 <4.7 <2.8 4.5 8,900 <6.0 <5.0 <5.0 <7.2 <10 <2.8 <10 <5.0 <7.2 <10 <2.8 <10 <5.0 <7.2 <710 <2.8 <10 <5.0 <6.9 <4.1 <6.0 <3.8 <5.0 <7.700 <10 69



AQUEOUS MATRIX
METHOD 8240 - HAZARDOUS SUBSTANCE LIST VOLATILE ORGANICS

ADDIŽIONAL	SAMPLE IDE	NTIFICATION
ADDITIONAL SAMPLE INFORMATION	U1d	U2d
Analysis Date Internal Standards Level Added = 50 µg/1 (% Recovery)	4/27/88	4/27/88
Bromochloromethane 1,4-Difluorobenzene Chlorobenzene D ₅	144 140 133	106 109 108
Surrogates Level Added = 50 µg/l (% Recovery) 4-Bromofluorobenzene	no n	100
1,2-Dichloroethane-D ₄ Toluene-D ₈	93 87 116	100 92 109

AQUEOUS MATRIX
METHOD 8240 - HAZARDOUS SUBSTANCE LIST VOLATILE ORGANICS

	SAMPLE IDENTIFICATION		
COMPOUND			
(Units of Measure = $\mu g/1$)	U1s	U2s	
	/16	30	
Acetone	<10	39	
Benzene	<4.4	<4.4	
Bromodichloromethane	<2.2	<2.2	
Bromoform	<4.7	<4.7	
Bromomethane	<10	<10	
2-Butanone	<10	<10	
Carbon disulfide	<5.0	<5.0	
Carbon tetrachloride	<2.8	<2.8	
Chlorobenzene	<6.0	<6.0	
Chloroethane	<10	<10	
2-Chloroethylvinyl ether	<10	<10	
Chloroform	2.2	2.2	
Chloromethane	<10	<10	
Dibromochloromethane	<3.1	<3.1	
1,1-Dichloroethane	<4.7	<4.7	
1,2-Dichloroethane	<2.8	<2.8	
1,1-Dichloroethylene	<2.8	<2.8	
trans-1,2-Dichloroethylene	<1.6	740	
1,2-Dichloropropane	<6.0	<6.0	
cis-1,3-Dichloropropene	<5.0	<5.0	
trans-1,3-Dichloropropene	<5.0	<5.0	
Ethylbenzene	<7.2	<7.2	
2-Hexanone	<10	<10	
Methylene chloride	<2.8	<2.8	
4-Methyl-2-pentanone	<10	<10	
Styrene	<5.0	<5.0	
1,1,2,2-Tetrachloroethane	<6.9	<6.9	
Tetrachloroethylene	<4.1	<4.1	
Toluene	<6.0	<6.0	
1,1,1-Trichloroethane	<3.8	<3.8	
1,1,2-Trichloroethane	<5.0	<5.0	
Trichloroethylene	<1.9	6.3	
Vinyl acetate	<10	<10	
Vinyl chloride	<10	21	
Total Xylenes	<5.0	<5.0	
		.	

AQUEOUS MATRIX
METHOD 8240 - HAZARDOUS SUBSTANCE LIST VOLATILE ORGANICS

·	SAMPLE IDE	NTIFICATION
ADDITIONAL SAMPLE INFORMATION	Ú1s	U2s
Analysis Date Internal Standards Level Added = 50 µg/l	4/27/88	4/28/88
(% Recovery) Bromochloromethane 1,4-Difluorobenzene Chlorobenzene D5	105 110 108	111 122 121
Surrogates Level Added = 50 µg/l (% Recovery) 4-Bromofluorobenzene 1,2-Dichloroethane-D4 Toluene-D8	96 98 112	89 91 104

AQUEOUS MATRIX
METHOD 8270 - HAZARDOUS SUBSTANCE LIST BASE/NEUTRAL/ACID EXTRACTABLES

SAMPLE IDENTIFICATION		
Dld	D2d	D3d
<10 <1.6 <50 <50 <1.9 <2.5 <1.9 <5.4 <1.9 <1.9 <1.9 <1.9 <3.3 <2.7 <2.7 <24 <42 <10 <10 <3.6 <2.4 <3.0 <3.6 <1.5 <50 <2.7	<10 <1.6 <50 <50 <1.9 <25 <1.9 <5.4 <1.9 <1.9 <3.3 <2.7 <2.7 <24 <42 <10 <10 <3.6 <2.4 <3.0 <3.6 <1.5 <50 <2.7	<10 <1.6 <50 <50 <50 <1.9 <25 <1.9 <5.4 <1.9 <1.9 <3.3 <2.7 <2.7 <24 <42 <10 <10 <3.6 <2.4 <3.0 <3.6 <1.5 <50 <2.7
4/25/88 4/28/88	4/25/88 4/28/88	4/25/88 4/28/88
141	114	165
69	88	50 54
	215	134
66	73 91	72 69
71 49	76	57
	01d <10 <1.6 <50 <50 <50 <1.9 <25 <1.9 <1.9 <1.9 <3.3 <2.7 <2.7 <24 <42 <10 <10 <3.6 <2.4 <3.0 <3.6 <2.4 <3.0 <3.6 <2.7 <2.7 <24 <42 <10 <10 <3.6 <2.7 <1.5 <50 <2.7 <2.7 <2.7 <2.7 <2.7 <2.7 <2.8 <2.9 <3.0 <3.6 <3.6 <3.8 <3.8 <3.0 <3.6 <3.8 <3.8 <3.0 <3.6 <3.8 <3.0 <3.6 <3.8 <3.0 <3.6 <3.8 <3.0 <3.6 <3.7 <3.0 <3.6 <3.7 <3.7 <3.7 <3.7 <3.7 <3.7 <3.7 <3.7	D1d D2d <10

AQUEOUS MATRIX METHOD 8240 - HAZARDOUS SUBSTANCE LIST VOLATILE ORGANICS

ADDITIONAL	SA	SAMPLE IDENTIFICATION		
SAMPLE INFORMATION	U-Surface	Leachate	Trip Blank	
Analysis Date <u>Internal Standards</u> Level Added = 50 μg/l (% Recovery)	5/2/88	5/2/88	4/27/88	
Bromochloromethane 1,4-Difluorobenzene Chlorobenzene-D ₅	88 90 89	93 91 94	100 107 101	
Surrogates Level Added = 50 μg/l (% Recovery)				
4-Bromofluorobenzene 1,2-Dichloroethane-D ₄ Toluene-D ₈	101 106 99	80 92 91	93 90 110	



AQUEOUS MATRIX
METHOD 8270 - HAZARDOUS SUBSTANCE LIST BASE/NEUTRAL/ACID EXTRACTABLES

	SAMPLE IDENTIFICATION		
COMPOUND (Units of Measure = µg/l)	D1d	D2d	D3d
Acenaphthene Acenaphthylene Anthracene Benzo(a)anthracene Benzo(b)fluoranthene Benzo(g,h,i)perylene Benzo(k)fluoranthene Benzoic acid Benzyl, alcohol Bis(2-chloroethoxy)methane Bis(2-chloroethyl)ether Bis(2-chloroisopropyl)ether Bis(2-chloroisopropyl)ether Bis(2-chloroisopropyl)ether Bis(2-chloroisopropyl)ether Busylbenzylphthalate 4-Chloroaniline 2-Chloroaniline 2-Chloroaphthalene 4-Chlorophenylphenylether Chrysene Dibenzo(a,h)anthracene Dibenzofuran 1,2-Dichlorobenzene 1,3-Dichlorobenzene 1,4-Dichlorobenzene 1,4-Dichlorobenzene 2,4-Dinitrotoluene 2,4-Dinitrotoluene 2,4-Dinitrotoluene Di-n-octylphthalate Fluoranthene Fluorene Hexachlorobenzene	<pre><1.9 <3.5 <1.9 <7.8 <2.5 <4.8 <4.1 <2.5 <50 <10 <5.3 <5.7 <2.5 <1.9 <2.5 <1.9 <4.4 <16.5 <1.9 <1.6 <2.5 <1.9 <1.6 <2.5 <1.9 <1.9 <2.5 <1.9 <2.5 <1.9 <2.5 <1.9 <2.5 <2.2 <1.9 <2.2 <1</pre>	<1.9 <3.5 <1.9 <7.8 <2.5 <4.8 <4.1 <2.5 <50 <10 <5.7 <5.7 <2.5 <10 <1.9 <4.2 <2.5 <10 <1.9 <4.4 <16.5 <1.9 <1.6 <2.5 <1.9 <1.6 <2.5 <1.9 <1.6 <2.5 <1.9 <1.6 <2.5 <1.9 <1.6 <2.5 <1.9 <1.6 <2.5 <1.9 <1.6 <2.5 <1.9 <1.9 <1.6 <2.5 <1.9 <1.9 <1.9 <1.9 <1.9 <1.9 <1.9 <1.9	<1.9 <3.5 <1.9 <7.8 <2.5 <4.8 <4.1 <2.5 <50 <10 <5.7 <5.7 <2.5 <1.9 <4.2 <2.5 <10 <1.9 <4.4 <16.5 <1.9 <1.6 <2.5 <1.9 <1.6 <2.5 <1.9 <1.6 <2.5 <1.9 <1.6 <2.5 <1.9 <1.6 <2.5 <1.9 <1.6 <2.5 <1.9 <1.6 <2.5 <1.9 <1.6 <2.5 <1.9 <1.6 <2.5 <1.9 <1.6 <2.5 <1.9 <1.6 <2.5 <1.9 <1.6 <2.5 <1.9 <1.6 <2.5 <1.9 <1.9 <1.6 <2.5 <1.9 <1.6 <2.5 <1.9 <1.9 <1.6 <2.5 <1.9 <1.9 <1.6 <2.5 <1.9 <1.9 <1.6 <2.5 <1.9 <1.9 <1.9 <1.9 <1.9 <1.9 <1.9 <1.9



I.D. #88-644

RECRA ENVIRONMENTAL, INC

QUALITY CONTROL INFORMATION - ACCURACY AQUEOUS MATRIX TOTAL METALS

PARAMETER	SAMPLE IDENTIFICATION	mg/l OF SPIKE	PERCENT RECOVERY
Total Aluminum Total Antimony Total Arsenic Total Barium Total Beryllium Total Cadmium Total Chromium Total Copper Total Iron Total Lead Total Manganese Total Mercury Total Selenium Total Selenium Total Silver Total Thallium Total Vanadium Total Zinc	U2d	2.0 0.50 0.040 2.0 0.050 0.20 0.50 0.25 1.0 0.040 0.50 0.0040 0.50 0.050 0.050 0.050 0.050	106 94 108 97 94 97 91 96 99 100 98 105 94 * 80 96 95

^{*}No recovery due to matrix interference.



AQUEOUS MATRIX
METHOD 8270 - HAZARDOUS SUBSTANCE LIST BASE/NEUTRAL/ACID EXTRACTABLES

COMPOUND		SAMPLE IDENTIF	CATION
(Units of Measure = µg/l)	D1s	D2s	
Acenaphthene Acenaphthylene Anthracene Benzo(a)anthracene Benzo(b)fluoranthene Benzo(g,h,i)perylene Benzo(k)fluoranthene Benzoic acid Benzyl alcohol Bis(2-chloroethoxy)methane Bis(2-chloroisopropyl)ether Bis(2-chloroisopropyl)ether Bis(2-chloroisopropyl)ether Bis(2-chloroisopropyl)ether Bis(2-chloroisopropyl)ether Busylbenzylphthalate 4-Bromophenylphenylether Butylbenzylphthalate 4-Chloroaniline 2-Chloroaniline 2-Chlorophenylphenylether Chrysene Dibenzo(a,h)anthracene Dibenzofuran 1,2-Dichlorobenzene 1,3-Dichlorobenzene 1,3-Dichlorobenzene 1,4-Dichlorobenzene 1,4-Dichlorobenzene 2,4-Dinitrotoluene Di-n-butylphthalate Dien-butylphthalate Di-n-butylphthalate Fluoranthene Fluorene Hexachlorobenzene	<1.9 <3.5 <1.9 <7.8 <2.5 <4.8 <4.1 <2.5 <50 <10 <5.7 <5.7 <2.5 <10 <1.9 <4.4 <16.5 <1.9 <1.9 <1.6 <2.5 <1.9 <2.5 <1.9 <2.5 <1.9 <2.5 <1.9 <2.5 <1.9 <2.5 <1.9 <2.5 <2.2 <1.9 <2.5 <2.2 <1.9 <2.5 <2.2 <1.9 <2.5 <2.2 <1.9 <2.2 <1.9 <2.2 <1.9 <2.2 <1.9 <2.2 <1.9 <2.2 <1.9 <2.2 <1.9 <2.2 <1.9 <2.2 <1.9 <2.2 <1.9 <2.2 <1.9 <2.2 <1.9 <2.2 <1.9 <2.2 <1.9 <2.2 <1.9 <2.2 <1.9 <2.2 <1.9 <2.2 <1.9 <2.2 <1.9 <2.2 <1.9 <2.2 <1.9 <2.2 <1.9 <2.2 <1.9 <2.2 <1.9 <2.2 <1.9 <2.2 <1.9 <2.2 <1.9 <2.2 <1.9 <2.2 <1.9 <2.2 <1.9 <2.2 <1.9 <2.2 <1.9 <2.2 <1.9 <2.2 <1.9 <2.2 <1.9 <2.2 <1.9 <2.2 <1.9 <2.2 <1.9 <2.2	<pre><1.9 <3.5 <1.9 <7.8 <2.5 <4.1 <2.5 <50 <10 <5.7 <5.7 <2.5 <1.9 <2.5 <10 <1.9 <4.4 <16.5 <1.9 <1.6 <2.5 <1.9 <1.6 <2.5 <1.9 <1.6 <2.5 <1.9 <2.5 <2.2 <1.9 <2.2 <2.2 <2.2 <2.2 <2.2 <2.2 <2.2 <2</pre>	D3s



AQUEOUS MATRIX
MÉTHOD 8270 - HAZARDOUS SUBSTANCE LIST BASE/NEUTRAL/ACID EXTRACTABLES

	SAMPLE IDENTIFICATION		
COMPOUND	D1s	nac	D3s
(Units of Measure = µg/l)	ΔT2	D2s	035
2-Methylnaphthalene	<10	<10	<10
Naphthalene	<1.6	<1.6	<1.6
2-Nitroaniline	<50	<50	<50
3-Nitroaniline	<50	<50	<50
4-Nitroaniline	<50	<50	<50
Nitrobenzene	<1.9	<1.9	<1.9
N-nitrosodi-n-propylamine	<25	<25	<25
N-mitrosodiphenylamine	<1.9	<1.9	<1.9
Phenanthrene	<5.4	<5.4	<5.4
Pyrene	<1.9	<1.9	<1.9
1,2,4-Trichlorobenzene	<1.9	<1.9	<1.9
2-Chlorophenol	<3.3	<3.3	<3.3
2,4-Dichlorophenol	<2.7	<2.7	<2.7
2,4-Dimethylphenol	<2.7	<2.7	<2.7
4,6-Dinitro-o-cresol	<24	<24	<24
2,4-Dinitrophenol	<42	<42	<42
2-Methylphenol	<10	<10 <10	<10 <10
4-Methylphenol	<10 <3.6	<3.6	<3.6
2-Nitrophenol	<2.4	<2.4	<2.4
4-Nitrophenol p-Chloro-m-cresol	17	<3.0	<3.0
Pentachlorophenol	<3.6	<3.6	<3.6
Phenol	<1.5	<1.5	<1.5
2,4,5-Trichlorophenol	<50	₹50	<50
2,4,6-Trichlorophenol	₹2.7	<2.7	<2.7
2,4,0=11 tentor ophenor			
Eutraction Date	A /25 /00	4/25/88	4/25/88
/ Extraction Date Analysis Date	4/25/88 4/28/88	4/28/88	4/28/88
Internal Standards	4/ 20/ 00	4/20/00	4/20/00
Level Added = 40 µg/1			
(% Recovery)	,		
Phenanthrene-D ₁₀	121	149	152
Surrogates	, 	""	
(% Recovery)			·
2-Fluorophenol	60	83	66
Pheno1-D ₅	65	82	110
2,4,6-Tribromophenol	224	206	143
Nitrobenzene-D5	69	77	72
2-Fluorobiphenyl	81	79	73
Terphenyl-D ₁₄	68	77	63
• •	·		

AQUEOUS MATRIX METHOD 8270 - HAZARDOUS SUBSTANCE LIST BASE/NEUTRAL/ACID EXTRACTABLES

	SAMPLE	IDENTIFICATION
COMPOUND (Units of Measure = µg/l)	Uld	U2d
Acenaphthene	<1.9	41.0
Acenaphthylene		<1.9
Anthracene	<3.5	<3.5
	<1.9	<1.9
Benzo(a)anthracene	<7.8	<7.8
Benzo(a)pyrene	<2.5	<2.5
Benzo(b)fluoranthene	<4.8	<4.8
Benzo(g,h,i)perylene	<4.1	<4.1
Benzo(k)fluoranthene	<2.5	<2.5
Benzoic acid	<50	<50
Benzyl alcohol	<10	<10
Bis(2-chloroethoxy)methane	<5.3	<5.3
Bis(2-chloroethyl)ether	<5.7	<5.7
Bis(2-chloroisopropyl)ether	<5.7	<5.7
Bis(2-ethylhexyl)phthalate	<2.5	<2.5
4-Bromophenylphenylether	<1.9	<1.9
Butylbenzylphthalate	<2.5	<2.5
4-Chloroaniline	₹10	<10
2-Chloronaphthalene	<1.9	<1.9
4-Chlorophenylphenylether	<4.2	<4.2
Chrysene	<2.5	<2.5
Dibenzo(a,h)anthracene	<2.5	<2.5
Dibenzofuran	<10	₹10
1,2-Dichlorobenzene	₹1.9	₹1.9
1,3-Dichlorobenzene	<1.9	<1.9
1,4-Dichlorobenzene	<4.4	<4.4
3,3'-Dichlorobenzidine	<16.5	
Diethylphthalate		<16.5
	<1.9	<1.9
Dimethylphthalate	<1.6	<1.6
Di-n-bütylphthalate	<2.5	<2.5
2,6-Dinitrotoluene	<1.9	<1.9
2,4-Dinitrotoluene	<5.7	<5.7
Di-n-octylphthalate	<2.5	<2.5
luoranthene	<2.2	<2.2
luorene	<1.9	<1.9
dexachlorobenzene	<1.9	<1.9
lexachlorobutadiene	<0.9	<0.9
lexachlorocylopentadiene	<25	<25
lexachloroethane	<1.6	<1.6
Indeno(1,2,3-cd)pyrene	<3.7	<3.7
I sophorone	<2.2	<2.2

(Continued)



I.D. #88-644

AQUEOUS MATRIX
METHOD 8270 - HAZARDOUS SUBSTANCE LIST BASE/NEUTRAL/ACID EXTRACTABLES

<u> </u>	SAMPLE IDEN	TIFICATION
COMPOUND (Units of Measure = µg/l)	U1d	U2d
2-Methylnaphthalene Naphthalene 2-Nitroaniline 3-Nitroaniline 4-Nitroaniline Nitrobenzene N-nitrosodi-n-propylamine N-nitrosodiphenylamine Phenanthrene Pyrene 1,2,4-Trichlorobenzene 2-Chlorophenol 2,4-Dichlorophenol 2,4-Dimethylphenol 4,6-Dinitro-o-cresol 2,4-Dinitrophenol 2-Methylphenol 4-Methylphenol 4-Nitrophenol 4-Nitrophenol p-Chloro-m-cresol Pentachlorophenol 2,4,5-Trichlorophenol 2,4,5-Trichlorophenol	<10 <1.6 <50 <50 <1.9 <25 <1.9 <5.4 <1.9 <1.9 <1.9 <1.9 <3.3 <2.7 <2.7 <24 <42 <10 <10 <3.6 <2.4 <3.0 <3.6 <1.5 <50 <2.7	<10 <1.6 <50 <50 <1.9 <25 <1.9 <5.4 <1.9 <1.9 <1.9 <1.9 <3.3 <2.7 <224 <42 <10 <10 <3.6 <2.4 <3.0 <3.6 <1.5 <50 <2.7
Extraction Date Analysis Date Internal Standards Level Added = 40 µg/l (% Recovery) Phenanthrene-D10 Surrogates (% Recovery) 2-Fluorophenol Phenol-D5 2,4,6-Tribromophenol	4/25/88 4/28/88 152 56 59 162	4/25/88 4/28/88 128 86 81 188
Nitrobenzene-D ₅ 2-Fluorobiphenyl Terphenyl-D ₁₄	41 98 52	77 75 63



- AQUEOUS MATRIX
METHOD 8270 - HAZARDOUS SUBSTANCE LIST BASE/NEUTRAL/ACID EXTRACTABLES

	SAMPLE IDENTIFICATION		
COMPOUND			
(Units of Measure = µg/l)	Uls	U2s	
Acenaphthene	<1.9	<1.9	
Acenaphthylene	<3.5	<3.5	
Anthracene	<1.9	<1.9	
Benzo(a)anthracene	<7.8	<7.8	
Benzo(a)pyrene	<2.5	<2.5	
Benzo(b)fluoranthene	<4.8	<4.8	
Benzo(g,h,i)perylene	<4.1	<4.1	
Benzo(k)fluoranthene	<2.5	<2.5	
Benzoic acid	<50	<50	
Benzyl alcohol	<10	<10	
Bis(2-chloroethoxy)methane	<5.3	<5.3	
Bis(2-chloroethyl)ether	<5.7	<5.7	
Bis(2-chloroisopropyl)ether	1	<5.7	
Bis(2-ethylhexyl)phthalate	<2.5	<2.5	
4-Bromophenylphenylether	<1.9	<1.9	
Butylbenzylphthalate	<2.5	<2.5	
4-Chloroaniline	₹10	<10	
2-Chloronaphthalene	<1.9	<1.9	
4-Chlorophenylphenylether	<4.2	<4.2	
Chrysene	<2.5	<2.5	
Dibenzo(a,h)anthracene	<2.5	<2.5	
Dibenzofuran	<10	<10	
1,2-Dichlorobenzene	<1.9	<1.9	
1,3-Dichlorobenzene	<1.9	<1.9	
1,4-Dichlorobenzene	<4.4	<4.4	
3,3'-Dichlorobenzidine	<16.5	<16.5	
Diethylphthalate	<1.9	<1.9	
Dimethylphthalate	<1.6	<1.6	
Di-n-butylphthalate	<2.5	<2.5	
2,6-Dinitrotoluene	<1.9	<1.9	
2,4-Dinitrotoluene	<5.7	<5.7	
Di-n-octylphthalate	<2.5	<2.5	
Fluoranthene	<2.2	<2.2	
Fluorene	<1.9	<1.9	
Hexachlorobenzene	<1.9	<1.9	
Hexachlorobutadiene	<0.9	<0.9	
Hexachlorocylopentadiene	<25	<25	
Hexachloroethane	<1.6	<1.6	
Indeno(1,2,3-cd)pyrene	<3.7	<3.7	
Isophorone	<2.2	<2.2	



I.D. #88-644

AQUEOUS MATRIX
METHOD 8270 - HAZARDOUS SUBSTANCE LIST BASE/NEUTRAL/ACID EXTRACTABLES

	SAMPLE IDENTIFICATION			
COMPOUND	1110	1126		
(Units of Measure = µg/l)	Uls	U2s		
2-Methylnaphthalene	<10	<10		
Naphthalene	<1.6	<1.6		
2-Nitroaniline	<50	<50		
3-Nitroaniline	<50	<50		
4-Nitroaniline	<50	<50		
Nitrobenzene	<1.9	<1.9		
N-nitrosodi-n-propylamine	<25	<25		
N-nitrosodiphenylamine	<1.9	<1.9		
Phenanthrene	<5.4	<5.4		
Pyrene	<1.9	<1.9		
1,2,4-Trichlorobenzene	<1.9	<1.9		
2-Chlorophenol	<3.3	<3.3		
2,4-Dichlorophenol	<2.7	<2.7		
2,4-Dimethylphenol	<2.7	<2.7		
4,6-Dinitro-o-cresol	<24	<24		
2,4-Dinitrophenol	<42 (10	<42 <10		
2-Methylphenol	<10 <10	<10		
4-Methylphenol	<3.6	<3.6		
2-Nitrophenol	<2.4	<2.4		
4-Nitrophenol p-Chloro-m-cresol	₹3.0	<3.0		
Pentachlorophenol	<3.6	<3.6		
Phenol	<1.5	<1.5		
2,4,5-Trichlorophenol	<50	<50		
2,4,6-Trichlorophenol	<2.7	<2.7		
Extraction Date	4/25/88	4/25/88		
Analysis Date	4/28/88	4/28/88		
Internal Standards				
Level Added = 40 µg/l				
(% Recovery)		4 Ä Ä		
Phenanthrene-D ₁₀	178	137		
Surrogates				
(% Recovery)	50	49		
2-Fluorophenol	50 69	49 56		
Phenol-D ₅ 2.4.6-Tribromophenol	171	146		
Nitrobenzene-Ds	55	63		
2-Fluorobiphenyl	63	70		
Terphenyl-D ₁ 4	47	· 74		
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AQUEOUS MATRIX
METHOD 8270 - HAZARDOUS SUBSTANCE LIST BASE/NEUTRAL/ACID EXTRACTABLES

	SAMPLE IDENTIFICATION			
COMPOUND	1	The second secon		
(Units of Measure = µg/l)	/ U-Surface	Leachate		
Acenaphthene	<1.9	<1.9		
Acenaphthylene	<3.5	<3.5		
Anthracene	<1.9	<1.9		
Benzo(a)anthracene	<7.8	<7.8		
Benzo(a)pyrene	<2.5	<2.5		
Benzo(b)fluoranthene	<4.8	<4.8		
Benzo(g,h,i)perylene	<4.1	<4.1		
Benzo(k)fluoranthene	<2.5	<2.5		
Benzoic acid	<50	<50		
Benzyl alcohol	<10	<10		
Bis(2-chloroethoxy)methane	<5.3	<5.3		
Bis(2-chloroethyl)ether	<5.7	<5.7		
Bis(2-chloroisopropyl)ether	<5.7	<5.7		
Bis(2-ethylhexyl)phthalate	<2.5	<2.5		
4-Bromophenylphenylether	<1.9	<1.9		
Butylbenzylphthalate	<2.5	<2.5		
4-Chloroaniline	<10	<10		
2-Chloronaphthalene	<1.9	<1.9		
4-Chlorophenylphenylether	<4.2	<4.2		
Chrysene	<2.5	<2.5		
Dibenzo(a,h)anthracene	<2.5	<2.5		
Dibenzofuran	<10	<10		
1,2-Dichlorobenzene	<1.9	<1.9		
1,3-Dichlorobenzene	<1.9	<1.9		
1,4-Dichlorobenzene	<4.4	<4.4		
3,3'-Dichlorobenzidine	<16.5	<16.5		
Diethylphthalate	<1.9	<1.9		
Dimethylphthalate	<1.6	<1.6		
Di-n-butylphthalate	<2.5	<2.5		
2,6-Dinitrotoluene	<1.9	<1.9		
2,4-Dinitrotoluene	<5.7	<5.7		
Di-n-octylphthalate	<2.5	<2.5		
Fluoranthene	₹2.2	<2.2		
Fluorene	<1.9	<1.9		
Hexachlorobenzene	<1.9	<1.9		
Hexachlorobutadiene	<0.9	<0.9		
Hexachlorocylopentadiene	<25	<25		
Hexachloroethane	<1.6	<1.6		
Indeno(1,2,3-cd)pyrene	<3.7	<3.7		
Isophorone	<2.2	<2.2		

AQUEOUS MATRIX
METHOD 8270 - HAZARDOUS SUBSTANCE LIST BASE/NEUTRAL/ACID EXTRACTABLES

	SAMPLE IDENTIFICATION		
COMPOUND	II Confine	Leachate	
(Units of Measure = μg/1)	U-Surface	Leachate	
2-Methylnaphthalene	<10	<10	
Naphthalene	<1.6	<1.6	
2-Nitroaniline	<50	<50	
3-Nitroaniline	<50	<50	
4-Nitroaniline	<50	<50	
Nitrobenzene	<1.9	<1.9	
N-nitrosodi-n-propylamine	<25	<25	
N-nitrosodiphenylamine	<1.9	<1.9	
Phenanthrene	<5.4	<5.4	
Pyrene	<1.9	<1.9	
1,2,4-Trichlorobenzene	<1.9	<1.9	
2-Chlorophenol	<3.3	<3.3	
2,4-Dichlorophenol	<2.7	<2.7	
2,4-Dimethylphenol	<2.7	<2.7	
4,6-Dinitro-o-cresol	<24	<24	
2,4-Dinitrophenol	<42 <10	<42 <10	
2-Methylphenol	<10 <10	<10	
4-Methylphenol	<3.6	<3.6	
2-Nitrophenol	<2.4	<2.4	
4-Nitrophenol	<3.0	<3.0	
p-Chloro-m-cresol	<3.6	<3.6	
Pentachlorophenol Phenol	<1.5	<1.5	
2.4.5-Trichlorophenol	<50	<50	
2,4,6-Trichlorophenol	₹2.7	<2.7	
2,4,0-11 (cirror objector		, <u> </u>	
Establish Data	4/25/88	4/25/88	
Extraction Date	4/28/88	4/28/88	
Analysis Date Internal Standards	4/20/00	4/20/00	
Level Added = 40 µg/1			
(% Recovery)			
Phenanthrene-D ₁₀	125	88	
Surrogates			
(% Recovery)			
2-Fluorophenol	87	80	
Pheno1-Ds	101	76	
2,4,6-Tribromophenol	185	184	
Nitrobenzene-D ₅	66	57	
2-Fluorobiphenÿl	77	66.	
Terphenyl-D ₁₄	82	99	
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AQUEOUS MATRIX METHOD 8080 - HAZARDOUS SUBSTANCE LIST ORGANOCHLORINE PESTICIDES/PCB'S

004004440	S	AMPLE IDENTIFICA	TION
COMPOUND (Units of Measure = µg/l)	Dld	D2d	D3d
Aldrin	<0.05	<0.05	<0.01
Alpha-BHC	<0.05	<0.05	<0.01
Beta-BHC	₹0.05	<0.05	<0.01
Delta-BHC	<0.05	<0.05	<0.01
Gamma-BHC	<0.05	<0.05	<0.01
Chlordane	<1	<1	<0.2
4,4'-DDD	<0.1	<0.1	<0.02
4,4'-DDE	<0.1	<0.1	<0.02
4,4'-DDT	<0.3	₹0.3	<0.05
Dieldrin	<0.1	<0.1	<0.02
Endosulfan I	<0.1	<0.1	<0.02
Endosulfan II	<0.1	<0.1	<0.02
Endosulfan sulfate	<0.3	<0.3	0.15
Endrin	<0.1	<0.1	<0.02
Heptachlor	<0.05	<0.05	<0.01
Heptachlor epoxide	<0.05	<0.05	<0.01
Toxaphene	<3	<3	<0.5
Aroclor 1016	<0.5	<0.5	<0.1
Aroclor 1221	<1	(1	(0.2
Aroclor 1232	<1	<1	1 <0.2
Aroclor 1242	<0.5	<0.5	<0.1
Aroclor 1248	<0.5	<0.5	<0.1
Aroclor 1254	₹ <0.5	<0.5	<0.1
Aroclor 1260	<0.5	<0.5	<0.1
Endrin ketone	<u><</u> 0.5	<0.5	0.23
Methoxychlor	₹1	<1	<0.2
Extraction Date	4/25/88	4/25/38	4/25/88
Analysis Date	4/30/88	4/30/88	4/29/88

AQUEOUS MATRIX
METHOD 8080 - HAZARDOUS SUBSTANCE LIST ORGANOCHLORINE PESTICIDES/PCB'S

COMPOUND	SAMPLE IDENTIFICA	ATION	
(Units of Measure = μg/l)	01s	D2s	D3s
Aldrin Alpha-BHC Beta-BHC Delta-BHC Gamma-BHC Chlordane 4,4'-DDD 4,4'-DDE 4,4'-DDT Dieldrin Endosulfan II Endosulfan sulfate Endrin Heptachlor Heptachlor Heptachlor epoxide Toxaphene Aroclor 1016 Aroclor 1221 Aroclor 1232 Aroclor 1242 Aroclor 1254 Aroclor 1260 Endrin ketone Methoxychlor	<0.01 <0.01 <0.01 <0.01 <0.02 <0.02 <0.02 <0.02 <0.02 <0.02 <0.02 <0.01 <0.01 <0.01 <0.1 <0.1 <0.1 <0.1 <0.2	<0.01 <0.01 <0.01 <0.01 <0.02 <0.02 0.037 <0.05 <0.02 <0.02 <0.02 <0.01 <0.01 <0.5 <0.1 <0.2 <0.2 <0.1 <0.1 <0.1 <0.1	<0.01 <0.01 <0.01 <0.01 <0.02 <0.02 <0.02 <0.02 <0.02 <0.02 <0.02 <0.01 <0.01 <0.01 <0.01 <0.1 <0.1 <0.1
Extraction Date Analysis Date	4/25/ 8 8 4/30/88	4/25/88 4/29/88	4/25/88 4/30/88

AQUEOUS MATRIX
METHOD 8080 - HAZARDOUS SUBSTANCE LIST ORGANOCHLORINE PESTICIDES/PÇB'S

COMPOUND	SAMPLE	IDENTIFICATION
(Units of Measure = μg/l)	U1d	U2d
Aldrin Alpha-BHC Beta-BHC Delta-BHC Gamma-BHC Chlordane 4,4'-DDD 4,4'-DDE 4,4'-DDT Dieldrin Endosulfan II Endosulfan sulfate Endrin Heptachlor Heptachlor epoxide Toxaphene Aroclor 1016 Aroclor 1221 Aroclor 1242 Aroclor 1248 Aroclor 1254 Aroclor 1260 Endrin ketone Methoxychlor	<0.01 <0.01 <0.01 0.031 <0.02 <0.02 <0.05 <0.02 <0.02 <0.02 <0.02 <0.01 <0.01 <0.1 <0.1 <0.1 <0.1 <0.1 <0.2	<pre></pre>
Extraction Date Analysis Date	4/25/88 4/29/38	4/25/88 4/30/88

AQUEOUS MATRIX
METHOD 8080 - HAZARDOUS SUBSTANCE LIST ORGANOCHLORINE PESTICIDES/PCB'S

	SAMPLE IDENTIFICATION		
COMPOUND (Units of Measure = µg/l)	Uls	U2s	
Aldrin	<0.01	<0.1	
Alpha-BHC	<0.01	<0.1	
Beta-BHC	<0.01	<0.1	
Delta-BHC	<0.01	<0.1	
Gamma-BHC	<0.01	0.27	
Chlordane	<0.2	<2	
4,4'-DDD	<0.02	<0.2	
4,4'-DDE	<0.02	<0.2	
4.4!-DDT	<0.05	<0.5	
Dieldrin	<0.02	<0.2	
Endosulfan I	<0.02	<0.2	
Endosulfan II	0.35	<0.2	
Endosulfan sulfate	0.15	<0.5	
Endrin	<0.02	₹0.2	
Heptachlor	<0.01	<0.1	
Heptachlor epoxide	<0.01	<0.1	
Toxaphene	<0.5	<5	
Aroclor 1016	<0.1	<1	
Aroclor 1221	<0.2	<2	
Aroclor 1232	<0.2	<2	
Aroclor 1242	<0.1	1 <1 ÷	
Aroclor 1248	<0.1	1 <1	
Aroclor 1254	<0.1	1 (1)	
Aroclor 1260	<0.1	<1	
Endrin ketone	<0.1	(1)	
Methoxychlor	₹0.2	<1 <1 ≤1 ₹2	
Extraction Date	4/25/88	4/25/88	
Analysis Date	4/30/88	4/30/88	

AQUEOUS MATRIX
METHOD 8080 = HAZARDOUS SUBSTANCE LIST ORGANOCHLORINE PESTICIDES/PCB'S

		* 70.1010[3
COMPOUND	SAMPLE II	DENTIFICATION
(Units of Measure = μg/l		Leachate
Aldrin Alpha-BHC Beta-BHC Delta-BHC Gamma-BHC Chlordane 4,4'-DDD 4,4'-DDE 4,4'-DDT Dieldrin Endosulfan II Endosulfan sulfate Endrin Heptachlor Heptachlor Heptachlor epoxide Toxaphene Aroclor 1016 Aroclor 1221 Aroclor 1242 Aroclor 1248 Aroclor 1254 Aroclor 1260 Endrin ketone Methoxychlor	<0.01 0.012 <0.01 <0.01 <0.02 <0.02 <0.02 <0.02 <0.02 <0.02 <0.01 <0.01 <0.1 <0.1 <0.1 <0.1 <0.1	<pre></pre>
Extraction Date Analysis Date	4/25/88 4/29/88	4/25/88 4/30/88
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AQUEOUS MATRIX

METHOD 7195

SAMPLE IDENTIFICATION	ANALYSIS DATE	PARAMETER (UNITS OF MEASURE) HEXAVALENT CHROMIUM (mg/l)
D1d D2d D3d D1s D3s U1d U2d U1s U2s U-Surface Leachate	4/26/88 4/26/88 4/26/88 4/26/88 4/26/88 4/26/88 4/26/88 4/26/88 4/26/88 4/26/88	<0.006 <0.006 0.0060 <0.006 0.0070 <0.006 <0.006 <0.006 <0.006 <0.006

AQUEOUS MATRIX WATER QUALITY TESTING

<u> </u>	[SAMPLE IDE	NTIFICATION
PARAMETER	METHOD NUMBER	UNITS OF MEASURE	ANALYSIS DATE	Dld	D2d
Total Alkalinity	310.1	mg/l as CaCO3	5/4/88	170	540
Ammonia Biochemical Oxygen	350.3 405.1	mg NH3-N/L mg/l	5/9/88 4/23/88	0.30 <4	2.0 <4
Demand Total Organic Carbon Chloride Chemical Oxygen	9060 9252 410.1	mg/l mg/l mg/l	5/5/88 4/28/88 5/7/88	36 71 31	93 110 54
Demand Color Total Cyanide Total Hardness	110.2 9010 130.2	Color Units mg/l mg/l	4/23/88 5/3/88 5/23/88	2.5 <0.01 480	140 <0.01 420
Nitrate Total Kjeldahl Nitrogen	9200 351.3	as CaCO3 mg NO3-N/L mg/1	4/23/88 5/10/88	<0.05 0.66	0.12 2.3
Odor Total Recoverable	140.1 9065	T.O.N. mg/l	5/17/88 5/11/88	0 <0.01	0 <0.01
Phenolics Filterable Residue (180°C)	160.1	mg/l	4/23/88	350	700
Volatile Residue (550°C)	160.4	mg/l	5/24/88	120	110
Sulfate Surfactants (MBAS) Turbidity	9038 425.1 180.1	mg/l mg/l N.T.U.	5/13/88 4/23/88 4/23/88	74 0.081 7.2	32 0.070 84
	1				

	METHOD	EINTÉS OS		SAMPLE ID	ENTIFICATION
PARAMETER	METHOD NUMBER	UNITS OF MEASURE	ANALYSIS DATE	D3d	D1s
Total Alkalinity	310.1	mg/l as CaCO ₂	5/4/88	270	290
Ammonia	350.3	mg NH3-N/L	5/9/88	1.2	<0.1
Biochemical Oxygen Demand	405.1	mg/1	4/23/88	6.1	<4
Total Organic Carbon	9060	mg/1	5/5/88	48	53
Chloride	9252	mg/1	4/28/88	100	49
Chemical Oxygen Demand	410.1	mg/1	5/7/88	60	19
Cólor	110.2	Color Units	4/23/88	23	7.5
Total Cyanide	9010	mg/l	5/3/88	0.010	<0.01
Total Hardness	130.2	mg/l as CaCO ₃	5/23/88	630	540
Nitrate	9200	mg NO3-N/L	4/23/88	0.59	0.88
Total Kjeldahl Nitrogen	351.3	mg/1	5/10/88	2.6	0.69
Odor	140.1	T.O.N.	5/17/88	0	0
Total Recoverable Phenolics	9065	mg/l	5/11/88	<0.01	<0.01
Filterable Residue (180°C)	160.1	mg/1	4/23/88	540	510
Volatile Residue 5205°C)	160.4	mg/1	5/24/88	220	160
Sulfate	9038	mg/1	5/13/88	27	58
Surfactants (MBAS)	425.1	mg/1	4/23/88	0.052	0.048
Turbidity	180.1	N.T.U.	4/23/88	84	160

	METHOD	UNITS OF	ANALYSIS	SAMPLE II	DENTIFICATION
PARAMETER	NUMBER		DATE	D2s	D3s
Total Alkalinity	310.1	mg/l as CaCO ₃	5/4/88	-	270
Ammonia Biochemical Oxygen Demand	350.3 405.1	mg NH3-N/L mg/l	5/9/88 4/23/88	-	0.12 <4
Total Organic Carbon Chloride Chemical Oxygen Demand	9060 9252 410.1	mg/l mg/l mg/l	5/5/88 4/28/88 5/7/88	-	21 140 14
Color Total Cyanide Total Hardness	110.2 9010 130.2	Color Units mg/l mg/l as CaCO ₂	4/23/88 5/3/88 5/23/88	<0.01	5.0 <0.01 540
Nitrate Total Kjeldahl Nitrogen	9200 351.3	mg NO3-N/L mg/l	4/23/88 5/10/88	-	0.81 0.32
Odor Total Recoverable Phenolics	140.1 9065	T.O.N. mg/l	5/17/88 5/11/88	-	0 <0.01
Filterable Residue (180°C)	160.1	mg/1	4/23/88	•	: 660
Volatile Residue (550°C)	160.4	mg/l	5/24/88	-	490
Sülfate Surfactants (MBAS) Turbidity	9038 425.1 180.1	mg/1 mg/1 N.T.U.	5/13/88 4/23/88 4/23/88	-	60 0.054 200

	METHOD	LINETTO OF		SAMPLE ID	ENTIFICATION
PARAMETER	METHOD NUMBER	UNITS OF MEASURE	ANALYSIS DATE	U1d	U2d
Total Alkalinity	310.1	mg/l as CaCO ₃	5/4/88	-	540
Ammonia Biochemical Oxygen Demand	350.3 405.1	mg NH3-N/L mg/l	5/9/88 4/23/88	7.5	0.11
Total Organic Carbon Chloride Chemical Oxygen Demand	9060 9252 410.1	mg/l mg/l mg/l	5/5/88 4/28/88 5/7/88	• •	48 16 51
Color Total Cyanide Total Hardness	110.2 9010 130.2	Color Units mg/l mg/l as CaCO2	4/23/88 5/3/88 5/23/88	12.5 <0.01	5.0 <0.01 600
Nitrate Total Kjeldahl Nitrogen	9200 351.3	mg NO ₃ -N/L mg/1	4/23/88 5/10/88	0.12	0.11 0.24
Odor Total Recoverable Phenolics	140.1 9065	T.O.N. mg/l	5/17/88 5/11/88	<0.01	0 <0.01
Filterable Residue (180°C)	160.1	mg/1	4/23/88	390	670
Volatile Residue (550°C)	160.4	mg/l	5/24/88		190
Sulfate Surfactants (MBAS) Turbidity	9038 425.1 180.1	mg/l mg/l N.T.U.	5/13/88 4/23/88 4/23/88	0.041 7.2	64 0.30 10

			·· ····	SAMPLE IDE	NTIFICATION
PARAMETER	METHOD NUMBER	UNITS OF MEASURE	ANALYSIS DATE	U-Surface	Leachate
Total Alkalinity	310.1	mg/l as CaCO ₃	5/4/88	180	500
Ammonia Biochemical Oxygen	350.3 405.1	mg NH3-N/L mg/l	5/9/88 4/23/88	<0.1 4.5	5.8 120
Demand Total Organic Carbon Chloride Chemical Oxygen	9060 9252 410.1	mg/l mg/l mg/l	5/5/88 4/28/88 5/7/88	29 11 44	120 220 900
Demand Color Total Cyanide Total Hardness	110.2 9010 130.2			40 <0.01 180	1500 <0.01 530
Nitrate Total Kjeldahl Nitrogen	9200 351.3	as CaCO3 mg NO3-N/L mg/l	4/23/88 5/10/88	0.11 1.6	0.78 6.8
Odor Total Recoverable	140.1 9065	T.O.N. mg/l	5/17/88 5/11/88	0 <0.01	0 14
Phenolics Filterable Residue (180°C)	160.1	mg/1	4/23/88	240	1,100
Volatile Residue (550°C)	160.4	mg/1	5/24/88	46	300
Sulfate Surfactants (MBAS) Turbidity	9038 425.1 180.1	mg/l mg/l N.T.U.	5/13/88 4/23/88 4/23/88	21 0.079 5.4	27 0.22 6,400
	1	1	1		

				SAMPLE IDENTIFICATION	
PARAMETER	METHOD NUMBER	UNITS OF MEASURE	ANALYSIS DATE	Uls_	U2s
Total Alkalinity	310.1	mg/l as CaCO3	5/4/88	400	640
Ammonia Biochemical Oxygen	350.3 405.1	mg NH3-N/L mg/l	5/9/88 4/23/88	0.17 <4	<0.1 <4
Demand Total Organic Carbon Chloride Chemical Oxygen	9060 9252 410.1	mg/l mg/l mg/l	5/5/88 5/28/88 5/7/88	28 33 22	16 <2 36
Demand Color Total Cyanide Total Hardness	110.2 9010 130.2	Color Units mg/l mg/l	4/23/88 5/3/88 5/23/88	7.5 <0.01 870	5.0 <0.01 890
Nitrate Total Kjeldahl Nitrogen	9200 351.3	as CaCO3 mg NO3-N/L mg/l	4/23/88 5/10/88	0.31 0.77	0.080 0.30
Odor Total Recoverable Phenolics	140.1 9065	T.O.N. mg/l	5/17/88 5/11/88	0 0.33	0 <0.01
Filterable Residue (180°C)	160.1	mg/l	4/23/88	530	800
Volatile Residue (550°C)	160.4	mg/1	5/24/88	240	230
Sulfate Surfactants (MBAS) Turbidity	9038 425.1 180.1	mg/l mg/l N.T.U.	5/13/88 4/23/88 4/23/88	64 0.074 120	120 110 20

QUALITY CONTROL INFORMATION - ACCURACY AQUEOUS MATRIX METHOD 8240 - HAZARDOUS SUBSTANCE LIST VOLATILE ORGANICS

SAMPLE IDENTIFICATION U2d MATRIX SPIKE

- AF B. D.		
COMPOUND	NANOGRAMS OF SPIKE	PERCENT RECOVERY
Benzene Chlorobenzene 1,1-Dichloroethylene Toluene Trichloroethylene	250 250 250 250 250 250	110 104 107 106 102
Analysis Date Internal Standards Level Added = 50 µg/l (% Recovery) Bromochloromethane 1,4-Difluorobenzene Chlorobenzene-D5	98 101 99	
Surrogates Level Added = 50 µg/l (% Recovery) 4-Bromofluorobenzene 1,2-Dichloroethane-D4 Toluene-D8	1	07 05 21

QUALITY CONTROL INFORMATION - ACCURACY AQUEOUS MATRIX METHOD 8240 - HAZARDOUS SUBSTANCE LIST VOLATILE ORGANICS

SAMPLE IDENTIFICATION UZZ MATRIX SPIKE DUPLICATE

		L DUPLICATE
COMPOUND	NANOGRAMS OF SPIKE	PERCENT RECOVERY
Benzene Chlorobenzene 1,1-Dichloroethylene Toluene Trichloroethylene	250 250 250 250 250 250	99 92 100 94 90
Analysis Date Internal Standards Level Added = 50 µg/l (% Recovery)	4/27/	/88
Bromochloromethane 1,4-Difluorobenzene Chlorobenzene-D ₅	106 114 110	
Surrogates Level Added = 50 µg/l (% Recovery) 4-Bromofluorobenzene 1,2-Dichloroethane-D ₄ Toluene-D ₈	100 97 115	

QUALITY CONTROL INFORMATION - ACCURACY
AQUEOUS MATRIX
METHOD 8270 - HAZARDOUS SUBSTANCE LIST BASE/NEUTRAL/ACID EXTRACTABLES

SAMPLE IDENTIFICATION U2d MATRIX SPIKE

COMPOUND	NANOGRAMS OF SPIKE	PERCENT RECOVERY
Acenaphthene 1,4-Dichlorobenzene 2,4-Dinitrotoluene N-nitrosodi-n-propylamine Pyrene 1,2,4-Trichlorobenzene 4-Chloro-3-methylphenol 2-Chlorophenol 4-Nitrophenol Pentachlorophenol Phenol	100 100 100 100 100 200 200 200 200 200	67 66 83 74 82 127 79 71 56 20 32
Extraction Date Analysis Date Internal Standards Level Added = 40 µg/l (% Recovery)	4/25 4/27	
Phenanthrene-D ₁₀ Surrogates (% Recovery) 2-Fluorophenol Phenol-D ₅ 2,4,6-Tribromophenol Nitrobenzene-D ₅ 2-Fluorobiphenyl Terphenyl-D ₁₄	152 61 75 156 73 68 55	



QUALITY CONTROL INFORMATION - PRECISION AQUEOUS MATRIX WATER QUALITY TESTING

			QUALITATICSTING				
PARAMETER	METHOD Number	UNITS OF MEASURE	SAMPLE IDENTIFICATION	VALUE 1	VALUE 2	MEAN	STANDARD DEVIATION
Total Alkalinity	310.1	mg/l as CaCO ₂	D3s	270	260	270	7.1
Ammonia Total Organic Carbon	350.3 9060	mg NH3-N/L mg/l	Leachate U-Surface	5.7 28	5.9 29	5.8	0.14
Chloride	9252	mg/l	D2d	100	110	29 110	0.71 7.1
Color Total Cyanide	110.2 9010	Color Units mg/l	U1s U2d	7.5 <0.01	7.5 <0.01	7.5 <0.01	0
Total Hardness	130.2	mg/l as CaCO ₂	D1d	470	490	480	14
Total Kjeldahl Nitrogen	351.3	mg/1	Leachate	6.9	6.6	6.8	0.21
Odor	140.1	T.O.N.	D3d	0	0	0	0
Filterable Residue (180°C)	160.1	mg/1	Leachate	1,100	1,100	1,100	0 0
Volatile Residue (550°C)	160.4	mg/1	Leachate	320	280	300	28
Surfactants (MBAS)	425.1	mg/1	D1d	0.072	0.090	0.081	0.013
Turbidity	180.1	N.T.U.	D2d	83	85	84	1.4

QUALITY CONTROL INFORMATION - ACCURACY AQUEOUS MATRIX WATER QUALITY TESTING

PARAMETER	METHOD NUMBER	SAMPLE IDENTIFICATION	MICROGRAMS OF SPIKE	PERCENT RECOVERY
Total Alkalinity Ammonia Total Organic Carbon Chloride Total Cyanide Total Hardness Total Kjeldahl Nitrogen Surfactants (MBAS)	310.1	D3s	5,000	113
	350.3	Leachate	200	94
	9060	U-Surface	50	112
	9252	D2d	2,500	86
	9010	U2d	48	107
	130.2	D1d	5,000	100
	351.3	Leachate	200	83

QUALITY CONTROL INFORMATION - ACCURACY AQUEOUS MATRIX METHOD 8270 - HAZARDOUS SUBSTANCE LIST BASE/NEUTRAL/ACID EXTRACTABLES

SAMPLE IDENTIFICATION U2d MATRIX SPIKE DUPLICATE

COMPOUND	NANOGRAMS OF SPIKE	PERCENT RECOVERY
Acenaphthene 1,4-Dichlorobenzene 2,4-Dinitrotoluene N-nitrosodi-n-propylamine Pyrene 1,2,4-Trichlorobenzene 4-Chloro-3-methylphenol 2-Chlorophenol 4-Nitrophenol Pentachlorophenol Phenol	100 100 100 100 100 200 200 200 200 200	64 48 80 71 95 95 85 90 39 87 37
Extraction Date Analysis Date Internal Standards Level Added = 40 µg/l (% Recovery)		5/88 7/88
Phenanthrene-D ₁₀ Surrogates (% Recovery) 2-Fluorophenol Phenol-D ₅ 2,4,6-Tribromophenol Nitrobenzene-D ₅	13 80 86 18) ; 36
2-Fluorobiphenyl Terphenyl-D ₁₄	66 78	

QUALITY CONTROL INFORMATION - ACCURACY AQUEOUS MATRIX METHOD 8080 - HAZARDOUS SUBSTANCE LIST ORGANOCHLORINE PESTICIDES/PCB'S

SAMPLE IDENTIFICATION U2d MATRIX SPIKE

NANOGRAMS	
OF SPIKE	PERCENT RECOVERY
0.20 0.20 0.20 0.20 0.20 0.20 0.20	77 118 87 95 97 115 146
4/25 4/30,	/88 /88
	0.20 0.20 0.20 0.20 0.20 0.20

QUALITY CONTROL INFORMATION - ACCURACY AQUEOUS MATRIX METHOD 8080 - HAZARDOUS SUBSTANCE LIST ORGANOCHLORINE PESTICIDES/PCB'S

SAMPLE IDENTIFICATION U2d MATRIX SPIKE DUPLICATE

COMPOUND	NANOGRAMS OF SPIKE	PERCENT RECOVERY			
Aldrin Gamma-BHC 4,4'-DDE Endosulfan II Endrin Heptachlor Methoxychlor	0.20 0.20 0.20 0.20 0.20 0.20 0.20	84 130 99 139 100 107 154			
Extraction Date Analysis Date	4/25/88 4/30/88				

New York State Department of Environmental Conservation State Office Building, Watertown, New York 13601

Division of Hazardous Waste Remediation 317 Washington Street Watertown, New York 13601-3787 315-785-2513



Thomas C. Jorling Commissioner

January 20, 1988

Mr. Michael Souva, Manager Plant Engineering NEW YORK AIR BRAKE Starbuck Avenue Watertown, New York 13601

RE: NEW YORK AIR BRAKE INDUSTRIAL LANDFILL

Dear Mr. Souva:

On January 19, 1988, I made an inspection with Mark Wuerschmidt at the subject landfill. At the time of the inspection, I noted extensive areas on the north and west perimeter slopes of the landfill that are ungraded and uncovered.

Please be advised that Appendix D of your consent order requires that all slopes must be stabilized, covered with an interim cap, and revegetated except for areas already stabilized and revegetated, #6 and 7. Also, the appendix requires that in order to maintain interim operation status, you must follow the operating conditions set forth in Appendix D.

Therefore, please advise me in writing by February 3, 1988 of your intentions to bring your site into compliance with the current consent order.

Sincerely,

Darrell M. Sweredoski, P.E.

Sr. Sanitary Engineer

Region 6

DMS:sqs

cc: Norm Parratt, Albany

New York State Department of Environmental Conservation State Office Building, Watertown, New York 13601

Thomas C. Jorling Commissioner

TO: The Record

FROM: Donald Hesler Donal Wester

DATE: January 13, 1988

RE: NEW YORK AIR BRAKE SITE INVESTIGATION

On January 12, I called Marc Wuerschmidt (New York Air Brake Company) to inquire on the status of the proposed investigation. Mr. Wuerschmidt is currently making arrangements for obtaining an easement to install a well on an adjacent property. In addition, he has been in contact with the consultants in regards to scheduling a driller for the site. The Department will soon receive a document which addresses the issue of groundwater tracing at the site and describes a proposed method for drilling into the bedrock fractures.

Later in the day, Mr. Wuerschmidt phoned and told me that during the week of January 18th, New York Air Brake will perform exploratory trenching to locate solutionally enlarged bedrock joints for the purpose of siting monitoring well locations. Drilling is tentatively scheduled to commence on January 25th.

DJH:sgs

eō: Darrell Sweredoski

Martin Brand

New York State Department of Environmental Conservation 317 Washington Street Watertown, New York 13601 315-785-2513



August 10, 1987

Mr. Marcus Wuerschmidt Project Engineer NEW YORK AIR BRAKE Starbuck Avenue Watertown, New York 13601

Dear Mr. Wuerschmidt:

As requested, listed below are documents concerning the New York Air Brake Company that the Department currently has on file.

June 19, 1981 - Preliminary Hydrogeological Evaluation Industrial Wastes Landfill - Watertown, New York - Prepared by Woodward-Clyde Consultants

April 1983 - Interim Report Baseline Groundwater Monitoring Program Prepared by O'Brien & Gere

February 1984 - Application for Part 360 Operating Permit for a Solid Waste management Facility - Prepared by O'Brien & Gere

February 1985 - Project Specifications

April 18, 1985 - Response to New York Air Brake Company's Request for Proposal - Prepared by Ecology and Environment, Inc.

May 12, 1987 - Order on Consent New York Air Brake Company Index #T121986

June 1987 - Proposal to New York State Department of Environmental Conservation Pursuant to Order of Consent #T121986 from New York Air Brake Company-Prepared by Lozier/Groundwater Associates

Please call me if you have any questions.

Sincerely,

Donald J. Hesler Engineering Geologist Division Solid/Hazardous Waste

DJH: kw

cc: J. Swartwout



New York State Department of Environmental Conservation

MEMORANDUM

TO:

The Record

FROM:

Russell Huyck ROH

SUBJECT:

NEW YORK AIR BRAKE LEACHATE COLLECTION SYSTEM

DATE:

November 23, 1987

On Tuesday, November 10, 1987, Don Hesler and I inspected the construction of NYAB's leachate collection system. At that time, I noticed that the contractor was attempting to compact a clay layer. Typical compaction consisted of 1-2 blows to the soil with the hoe bucket in conjunction with 1 pass with a hand operated compactor. Visual inspection indicated that a low level of compaction had been obtained and was accepted by a NYAB representative.

Due to poor compaction, an impermeable layer may not have been produced and subsequent surface water infiltration may occur. This will dilute the concentration of any pollutants and affect future sampling results.

RDH:sgs

cc:

D. Hesler

D. Sweredoski



New York State Department of Environmental Conservation

MEMORANDUM

TO:

The Record

FROM:

Darrell Sweredoski

SUBJECT:

AIR BRAKE LANDFILL LEACHATE COLLECTION SYSTEM

DATE:

October 23, 1987

On this date, I met with Mark Wuerschmidt to inspect the progression of the leachage collection system installation.

The contractor, Graham Construction, has placed and backfilled the line from the Watertown sewer line connection to the base of the landfill on the North side.

I noted that the starting invert of the collection system appeared to be 1 to 2 feet above the standing water level in the existing swale. I told Mark of my reservations about effectively collecting leachate under these conditions. Mark stated that he had to maintain a minimum 4% grade for gravity flow in the pipe, and with that criteria, he was at the lowest elevation as engineering would allow. He thought that if they placed clay to bring the grade up, the system would be effective.

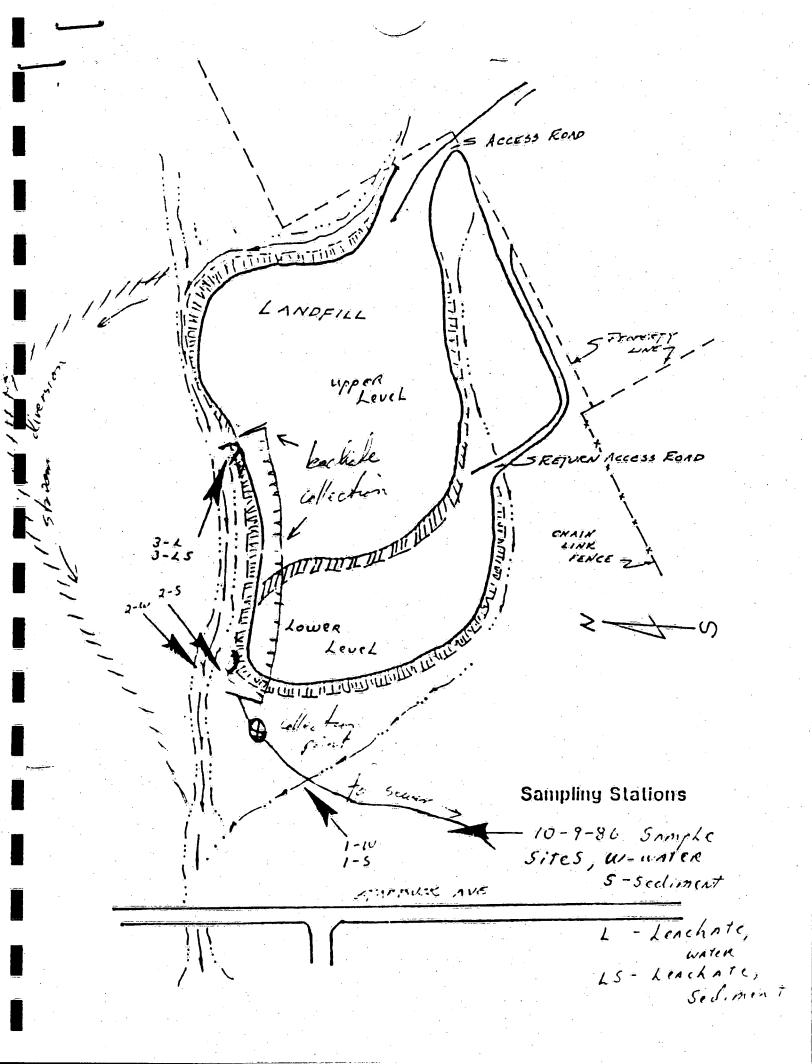
I told him that there could still be an underflow condition, and they would in the end have to demonstrate the effectiveness of the system. If they were not sure at this point if the system was going to be effective, then they should reconsider a design change to lower the leachate collection pipe, and install a lift station. Mark said that he would discuss this matter with Mike Souva.

We next toured the stream diversion work. The diversion work is mostly complete, except at the upper end, where additional channeling must be done.

They have also completed regrading the top of the landfill, but additional work must be completed on the east side after the leachate collection system is installed.

DMS:sgs

cc: John Swartwout



ESTABLISHED 1890

NEW YORK AIR BRAKE COMPANY

A UNIT OF GENERAL SIGNAL CORPORATION

STARBUCK AVENUE : WATERTOWN, N.Y . 13601

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August 12, 1986

Darrell Sweredoski
Senior Sanitary Engineer
New York State Department of
Environmental Conservation
State Office Building
317 Washington Street
Watertown, New York 13601

Re: Response to Request for Further Clarification of Volumes and Types of Waste Deposited in NYAB's Landfill

Dear Mr. Sweredoski:

At a meeting on July 10, 1986 between representatives of the New York Air Brake Company ("NYAB") and the Department of Environmental Conservation (the "Department"), the Department requested a listing of known types and volumes of industrial wastes deposited in NYAB's landfill. This listing was to be based upon available records and, in the absence of such records, NYAB's best estimates. The volumes of liquid wastes were to be presented in gallons and the volumes of solid wastes in cubic yards, if possible. This information is provided in Attachment 1 to this letter ("Landfill Description and Content").

In addition, the Department requested that NYAB review, and revise if necessary, the volume estimates in its "Hazardous Waste Disposal Questionnaire" submitted to the Department on July 23, 1984. NYAB has reviewed the Questionnaire and requests that the Department deem that document revised in accordance with the information provided in Attachment 2 ("Community Right To Know Clarification"). Attachment 3 is a copy of Part II of the

August 12, 1986 Page 2

Questionnaire, revised to show the appropriate corrections. The types and quantities of hazardous wastes which likely are present in NYAB's landfill, as revised, are summarized as well on the second page of Attachment 1.

If you have any questions regarding the enclosed information, please feel free to contact me.

Very truly yours,

Marcus A. Wuerschmidt Maintenance Project Engineer

Enclosures cc: Scott M. Turner, Esq. Michael G. Souva

Landfill Description and Content

Owner - New York Air Brake Company
Address - Starbuck Avenue, Watertown, NY 13601
Location - Adjacent to North Side of Manufacturing
Facilities
Area - 9.9 Acres

Material Description	Waste Code ² /	Estimated Quantity ¹
Foundry Sand	N823	86,652 cu. yd.
Ash, Coal	N899	57,768 cu. yd.
Construction Rubble (concrete, brick, wood, metal, roofing, asphalt)	N899	57,768 cu. yd.
Scrap Process Waste (Dried paint, barrels, cans, castings, machine parts and miscellaneous waste)	N899	40,841 cu. yd.
Slag (from gray iron foundry)	N860	21,663 cu. yd.
Dust Collector Residue from molding and cleaning gray iron castings	N899	11,554 cu. yd.
Scrap Metal Contaminated with Oil (chips from machining iron, steel and aluminum)	N855	5,777 cu. yd.
Refractory Brick	N853	2,888 cu. yd.
Scrap Paper and Wood Products	N899	3,177 cu. yd.
Scrap Rubber Products (hose, belting and tires)	N899	433 cu. yd.
Asbestos Waste (pipe and ductwork insulation)	N807	29 cu. yd.
Food Waste	N822	289 cu. yd.
Total	·	288,839 cu. yd.

Material Description1/	Waste Code ² /	Estimated Quantity ¹
Ignitable, Liquid Waste	D001	6,113 gallons
Corrosive Liquid Waste	D002	1,748 gallons
Perchloroethylene Trichloroethylene	F001	2,065 gallons
Cyanide Bath Plating Solutions	F007	873 gallons
Cyanide Bath Plating Sludges	F008	348 gallons
Stripping and Cleaning Bath Solutions containing Cyanide	F009	8,608 gallons
Chromium in Solutions	D007	933 gallons
Oil Contaminated with .02% Lead	D008	1,125 gallons
Heat Treat Sludge Oil Mixed with Cyanide	F010	523 gallons
Spent Cyanide Salts from Heat Treating	F011	173 gallons
Waste Cutting, lubricating and hydraulic oils mixed with water process liquids and mineral spirits	N001 N002 N003 N004 N005	126,000 gallons

Total

148,509 gallons

- Material Description the description of the contents of the landfill are based on NYAB's records and best estimates.
- Waste Code The hazardous waste codes utilized are those identified and listed in 6 NYCRR Part 371; the nonhazardous waste type codes utilized are those published by the NYSDEC, Division of Solid Waste.
- Estimated Quantity The total amount of each waste believed present in the landfill is expressed in cubic yards for solid wastes (these numbers represent compressed material as it exists in the landfill at this time), or gallons for liquid wastes deposited in the landfill. Liquid wastes were deposited at the landfill only between 1/70 and 7/77.

COMMUNITY RIGHT TO KNOW SURVEY CLARIFICATION

On July 23, 1984, the New York Air Brake Company ("NYAB") submitted the "Hazardous Waste Disposal Questionnaire," Generator Form to the New York State Department of Environmental Conservation (the "Department"). This Questionnaire was part of the "Community Right-To-Know" Survey. On June 10, 1986, the Department requested that NYAB review its records and the Questionnaire in order to clarify the information provided, with special attention to the types and volumes of hazardous wastes, if any, deposited in NYAB's on-site landfill. As a result of that review, NYAB submits the following corrections and clarifications to Part II of the questionnaire. The following corrections and clarifications refer to disposal site DS #2 (NYAB's landfill). For ease of review, a copy of Part II of the questionnaire, illustrating the corrections, is also being provided.

1. Ignitable Wastes, EPA Waste Code D001 (p. 1)*

This general description and noted quantity (24.45 tons) includes the toluene, xylene, acetone, benzene, isobutyl alcohol, methanol and naphthalene listed individually on later pages of the Questionnaire. These materials were incorrectly listed as separate line items, using the EPA waste codes for the material in pure form. Accordingly, the entries for these specific materials should be deleted.

2. Corrosive Waste, EPA Waste Code D002 (p. 2)

This listing includes all basic and acidic waste materials. Accordingly, it is not appropriate to list hydroflouric acid, EPA Waste Code Ul34, as a separate item on page 8 of Part II. This material would have been used in conjunction with other substances. Any waste generated would have been blended, and would not have been pure as indicated in the Questionnaire. Hydroflouric acid, therefore, should be deleted as a separate line item; the quantity of such acid deposited in DS #2 is included in the estimated quantity of corrosive waste noted on page 1 of Part II.

p. ___ refers to the relevant page of Part II of the guestionnaire.

3. Cadmium, EPA Waste Code D006 (p. 2)

Cadmium was not disposed of at the landfill in its pure form, but rather as a component of the waste Cyanide Bath Plating Solutions and Cyanide Bath Plating Sludges listed on pages 3 and 4 of Part II of the Questionnaire. Because of the Questionnaire's format, however, listing this material as a separate line item seemed the only way to note its presence in these waste streams. Nonetheless, cadimum should not be listed as a separate item. The quantity of cadmium noted on page 2 of Part II is included in the total quantities for the Cyanide Bath Plating Solutions and Sludges.

4. Chromium, EPA Waste Code D007 (p. 2)

This material was not disposed of in its pure form in the landfill, but was dissolved in a solution. The designation of this material as D007 waste seemed the best way to describe this waste stream. In addition, the quantity of chromium deposited at the landfill is now estimated at .2 tons.

5. Lead, EPA Waste Code D008 (p. 2)

This material was not disposed of in its pure form in the landfill, but was present in various waste oils. The designation of this material as a DOO8 waste seemed the best way to describe this waste stream. In addition, the quantity of lead deposited at the landfill is now estimated at .0009 tons.

6. <u>Perchloroethylene and Trichloroethylene</u>, EPA Waste Code F001 (p. 3)

These two solvents were contaminated with water and oil at the time of disposal at the landfill. They were incorrectly listed twice: the second time, on pages 10 and 11 respectively, as pure material under the following names and numbers -- tetrachloroethylene (Perchloroethylene), U210, and trichlorethylene, U228. Accordingly, the separate line items, on pages 10 and 11, indicating that tetrachloroethylene and trichlorethylene had been deposited at the landfill, should be deleted.

7. Sodium Cyanide Salts, EPA Waste Code Pl06, Copper Cyanide, EPA Waste Code P029, Cyanides, EPA Waste Code P030 (p. 6)

These materials were not disposed of in their pure form in the landfill, but were components of Cyanide Bath Plating Solutions and Cyanide Bath Plating Sludges

listed on page 4 of Part II of the Questionnaire. Accordingly, the separate listings of these materials on page 6 of Part II of the Questionnaire was incorrect and should be deleted.

> 8. Methyl Ethyl Ketone Peroxide in Solution, EPA Waste Code U159 and Methyl Ethyl Ketone Peroxide in Resins, EPA Waste Code U160 (p. 9)

Neither of these chemicals were utilized in pure form but small quantities would have been present in some of the plastic materials utilized in NYAB's manufacturing processes. Because these chemicals vaporize during the application and curing processes, no amounts of these chemicals were deposited in the landfill. Accordingly, the line items for these chemicals should be deleted.

The following chart provides in gallons the estimated volumes of hazardous wastes deposited in NYAB's landfill between 1970 and 1977, the only period when such wastes were disposed of at the landfill:

		Quant	ity
Hazardous Waste	EPA CODE	Tons	Gallons
Ignitable Waste	D001	24.45	6,113
Corrosive Waste	D002	6.99	1,748
Perchloroethylene Trichloroethylene	F001	13.97	2,065
Cyanide Bath Plating Solutions	F007	3.49	873
Cyanide Bath Plating Sludges	F008	1.39	348
Stripping & Cleaning Bath Solutions Containing Cyanide	F009	34.43	8,608
Chromium [1]	D007	.2 [3]	933
Lead [2]	D008	.0009 [3	3] 1,125
Heat Treat Sludge Oil Mixed with Cyanide	F010	2.09	523
Spent Cyanide Salts from Heat Treating	F011	.69	173

NOTES

- 1/ The 933 gallons is a diluted solution with a chrome content 5.27% by weight.
- 2/ The 1,125 gallons is waste oil with a lead content of .02% by weight.
- 3/ This number has been recalculated.

NAME New York Air Brake Co.	NYDOO2235216				
ADDRESS Starbuck Ave.					
CITY Watertown	STATE	13601			



DATE July 18,1984

MAZARDOUS WASTE DISPOSAL SITE (SEE INSTRUCTIONS)	2. DESCRIPTION OF HAZARDOUS WASTES DEPOSITED AT THIS LOCATION (SEE INSTRUCTIONS)	3. EPA WASTE CODE	4. WASTE DISPOSED OF QUANTITY OF WASTE (TONS)	P ainoi1	SOLID W	5. WASTE DISPOSAL DATES	6. TRANSPORTER OF HAZARDOUS WASTE (SEE INSTRUCTIONS)
DS #1	lgnitable	D001	58.06	x		1/52 to 12/69	т #1
DS #2	Ignitable	D001	24.45	x		1/70 to 7/77	T #1
DS #3	Ignitable	D001	14.26	X		8/77 to 12/81	т #2
DS #1	Corrosive	D002	16.58	x		1/52 to 12/69	т #1
DS #2	Corrosive	D002	6.99	x		1/70 to 7/77	Т #1.
DS #3	Corrosive	D002	4.07	x		8/77 to 12/81	Т #2
103 #1	Cadini un	D006	.16	×		1/52 to	7 # 1

Attachment 3

NAME New York Air Brake	Co.	ICS NUME	DER - EPA ID NUMBER 02235216
ADDRESS Starbuck Ave.			22233210
CITY Watertown		STATE NY	13601



1. HAZARDOUS WASTE DISPOSAL SITE (SEE INSTRUCTIONS)	2. DESCRIPTION OF HAZARDOUS WASTES DEPOSITED AT THIS LOCATION (SEE INSTRUCTIONS)	3. EPA WASTE CODE	4. WASTE DISPOSED OF QUANTITY OF WASTE (TONS)	F GINOIN	SOLID WE WE	5. WASTE DISPOSAL DATES	6. TRANSPORTER OF HAZARDOUS WASTE (SEE INSTRUCTIONS)
95 #2	Cadmium	9006	.08	×		1/70 to	T #1
DS #3	Cadmium	D006	.04	X ;		7/77 to 12/01	T #2
DS #1	Chromium	D007	.16 .4	x		1/52 to 12/69	Τ #1
DS #2	Chromium	D007	.08 .2	X		1/70 to 7/77	T #1
DS #3	Chromium	D007	 ./	x		7/77 to 12/81	Т #2
DS #1	Lead	D008	. 07 • 002 8	x		1/52 to 12/69	т #1 '
DS #2	Lead	D008	.03 .0009	×		1/70 to 7/77	Т #1

NAME New York Air Brake	Co.	ICS NUMB	ER - EPA ID NUMBER)02235216
ADDRESS Starbuck Ave.			
CITY Watertown		STATE NY	13601



DATE __inly_18__1984'

1 HAZARDOUS WASTE DISPOSAL SITE (SEE INSTRUCTIONS)	2: DESCRIPTION OF HAZARDOUS WASTES DEPOSITED AT THIS LOCATION (SEE INSTRUCTIONS)	3 EPA WASTE CODE	4. WASTE DISPOSED OF QUANTITY OF WASTE (TONS)	ביטטניו	SOCID W	5. WASTE DISPOSAL DATES	6. TRANSPORTER OF HAZARDOUS WASTE (SEE INSTRUCTIONS)
DS #3	Lead	D008	. 02 .0004	X.		7/77 to 12/81	T #2
DS #1	Perchloroethylene Trichloroethylene	F001	33.17	x		1/52 to 12/69	Т #1
DS #2	Perchloroethylene Trichloroethylene	F001	13.97	x		1/70 to 7/77	T #1
DS #3	Perchloroethylene Trichloroethylene	F001	7.37	X		8/77 to 7/81	T #2
DS #4	Perchloroethylene Trichloroethylene	F001	.77	x		8/81 to 12/81	T #3
DS #1	Cyanide Bath Plating Solution	s F007	8.28	х		1/52 to 12/69	т #1
DS #2	Cyanide Bath Plating Solution	s F007	3.49	x		1/70 to 7/77	Т #1

New York Air Brake Co. ICS NUMBER - EPA ID NUMBER NYD002235216

ADDRESS Starbuck Ave.

CITY STATE STATE NY 13601

GENERATOR FORM
PART - II



I. HAZARDOUS WASTE DISPOSAL SITE (SEE INSTRUCTIONS)	2. DESCRIPTION OF HAZARDOUS WASTES DEPOSITED AT THIS LOCATION (SEE INSTRUCTIONS)	3. EPA WASTE CODE	4. WASTE DISPOSED OF QUANTITY OF WASTE (TONS)	E GINOIT	SOLID WE	5. WASTE DISPOSAL DATES	6. TRANSPORTER OF HAZARDOUS WASTE (SEE INSTRUCTIONS)
DS #3	Cyanide Bath Plating Solutions	F007	2.05	X		8/77 to 12/81	T #2
DS #1	Cyanide Bath Plating Sludges	F008	3.31	x		1/52 to 12/69	Т #1
DS #2	Cyanide Bath Plating Sludges	F008	1.39	x		1/70 to 7/77	T #1
DS #3	Cyanide Bath Plating Sludges	F008	.81	x		8/77 to 12/81	Т #2
DS #1	Stripping & Cleaning Bath Solutions containing Cyanide	F009	8295	x		1/52 to 12/69	Т #1
DS #2	Stripping & Cleaning Bath solutions containing Cyanide	F009	34.43	x		1/70 to 7/77	т #1
DS #3	Stripping & Cleaning Bath Solutions containing Cyanide	F009	20.36	X		8/77 to 12/81	T #2

NAME
New York Air Brake Co. NYD002235216

ADDRESS
Starbuck Ave.

CITY
Watertown
STATE
NY
13601

GENERATOR FORM
PART - II



HAZARDOUS WASTE DISPOSAL SITE (SEE INSTRUCTIONS)	2. DESCRIPTION OF HAZARDOUS WASTES DEPOSITED AT THIS LOCATION (SEE INSTRUCTIONS)	3. EPA WASTE CODE	4. WASTE DISPOSED OF QUANTITY OF WASTE (TONS)	רוסחום ב	SOLID B	5. WASTE DISPOSAL DATES	6. TRANSPORTER OF HAZARDOUS WASTE, (SEE INSTRUCTIONS)
DS #1	Heat Treat Sludge, oil mixed with Cyanides	F010	4.97	X		1/52 to 12/69	Т #1
DS #2	Heat Treat Sludge, oil mixed with Cyanide	F010	2.09	x		1/70 to 7/77	Т #1
DS #3	Heat Treat Sludges, Oil mixed with Cyanide	F010	1.22	X		8/77 to 12/81	Т #2
DS #1	Spent Cyanide Salts from Heat Treating	F011	1.69	x		1/52 to 12/69	Т #1
DS #2	Spent Cyanide Salts from Heat Treating	FOII	. 69	X		1/70 to 7/77	Т #1
DS #3	Spent Cyanide Salts from Heat Treating	F011	.40	x		7/77 to 12/81	T #2
DS #1	Copper Cyanide	P023	.16.	×		1/52 to 12/65	T #1

NAME New York Air Brake Co.	ICS NUMBER - EPA ID NUMBER NYD002235216				
ADDRESS Starbuck Ave.					
City Watertown	STATE NY	13601			



HAZARDOUS WASTE DISPOSAL SITE (SEE INSTRUCTIONS)	2. DESCRIPTION OF HAZARDOUS WASTES DEPOSITED AT THIS LOCATION (SEE INSTRUCTIONS)	3. EPA WASTE CODE	4. WASTE DISPOSED OF QUANTITY OF WASTE (TONS)	F ainon	SOLID B	5. WASTE DISPOSAL DATES	6. TRANSPORTER OF HAZARDOUS WASTE (SEE INSTRUCTIONS
05 #2	Gopper Gyanide	P029	.08	X		1/70 to	T #1
03 #3	Copper Cyanide	P029	.84	×		7/77 to 12/81	T-#2-
—8.5 #1	Cyanides	P030	.80	×		1/52 to 12/63	T #1
93 /2	Cyanides	P030	.34	×		1/70-to 7/77-	T-#1
85 #3	Cyanides	P030	2	×		7/77 to 12/81	T #2
85 #1	-Sodium Gyanide Salts	P106	8 28	×	:	1/52 to 12/69	T-#1-
DS #2	Sodium Cyanide Salts	P106	3.49	×		1/70-to 7/72	T-#1

NAME New York Air Brake Co.				ICS NUMBER - EPA ID NUMBER NYD002235216				
Stai	ss buck	Ave						
CITY					STATE	ZIP		
_Wat	rtown	1			NY	13601		



HAZARDOUS WASTE DISPOSAL SITE (SEE INSTRUCTIONS)	2: DESCRIPTION OF HAZARDOUS WASTES DEPOSITED AT THIS LOCATION (SEE INSTRUCTIONS)	3. EPA WASTE CODE	4. WASTE DISPOSED OF QUANTITY OF WASTE (TONS)	LIQUID 3 SOLID B BAUMS	5. WASTE DISPOSAL DATES	6. TRANSPORTER OF HAZARDOUS WASTE (SEE INSTRUCTIONS)
DG-#3	Sodium Gyanide Salts	-P106	3.03	×	7/77 to	T #2•
-DS #1	Acctone	- 0002	. 16	×	1/52 to	*************************************
'95 #2	Acetone	Ü002	8	y	1/70 to	T #1_
-86-#3		V 002			9/77 12/81	7 #2
-95-#1	Benzenc	U019	.16	×	1/52 to 12/69	-T #1
DS #2	Benzene	U019	.08	×	1/70 to 7/77_	T-#1
-DS #3	Benzone	U019	Oİ.	×	8/77-to	T_#2

NAME New York Air Brake Co.	ICS NUMBER - EPA ID NUMBER NYD002235216				
ADDRESS Starbuck Ave.					
CITY Watertown	STATE NY	13601			



HAZARDOUS WASTE DISPOSAL SITE (SEE INSTRUCTIONS)	2. DESCRIPTION OF HAZARDOUS WASTES DEPOSITED AT THIS LOCATION (SEE INSTRUCTIONS)	3. EPA WASTE CODE	4. WASTE DISPOSED OF QUANTITY OF WASTE (TONS)	FC QI QI	SOLID W	5. WASTE DISPOSAL DATES	6. TRANSPORTER OF HAZARDOUS WASTE (SEE INSTRUCTIONS
· · ·			·	בו	S E		•
					1		
- DC #3					1		T- #1
	injul or idol to held	, ,		^		12/69	
85 #2	Hydrofluoric Acid	-0134-	08	y:		1/70-to	T_#1
	my droi idor re Adiro	0171	.00	_		7/77	
							•
DC #3	Hydroflueric Acid	4134	.04	X		8/77 to	7.42
	-					12,/81	
	·						
-83 #1		-U140	.80	y.		1452	7 71
53 % (Isobaty i Alcolio i	0110		^		12/63	in the second
			· · · · · · · · · · · · · · · · · · ·				
				. :			
95 #2	1sobuty1 Alcohol	-U140	34	X.		1/70 to	T #1
``. 		ł				7/77	
A						•	
		• • • • •	The state of the s				
-DC-#3	isobacy) Alcohol	-04-0	2	X		8/77 to	T #2
		1				12/81	
03 #1	mechano1	-U154	1.69			1/52 to	
	, and the second	.5.7.	ر ۱۰۰۰	^		12/69	T # T

NAME
New York Air Brake Co. ICS NUMBER - EPA ID NUMBER |
ACORESS |
Starbuck Ave. |
CITY |
Watertown |
STATE |
NY |
13601 |

GENERATOR FORM
PART - II



HAZARDOUS WASTE DISPOSAL SITE (SEE INSTRUCTIONS)	2. DESCRIPTION OF HAZARDOUS WASTES DEPOSITED AT THIS LOCATION (SEE INSTRUCTIONS)	3. EPA WASTE CODE	4. WASTE DISPOSED OF QUANTITY OF WASTE (TONS)	LIQUID 3	DRUMS \$	5. WASTE DISPOSAL DATES	6. TRANSPORTER OF HAZARDOUS WASTE (SEE INSTRUCTIONS)
-05 #2	Methanel	-U154	.69	×	+	1/70-to 7/77-	T #1
-33-#3	nechanol	015 4	.40	*		8/77 to	T-#2
05 #1		11150	36	Y.		1/62 to	T #1
						12/69	
DS #2	Methyl Ethyl Ketone Peroxide	U159	-35	X		1/70 to 7/77	T-#1
DC-#3	Nothyl Sthyl Kotone Persnide	U159	2	X-		8/77 to 1 2/81	T #3
99-#1	-Hethyl Ethyl Kotone Peremide	U160	36	¥		1/62 to	Т.#1
BS_#2	Mothyl Ethyl Katone Peroxide	U160	35	x	+	1/70 to	Т #1
•	in-resins-		•			7/77	

NAME New York Air Brake	Co.	NYD002235216				
ADDRESS Starbuck Ave.						
CITY Watertown		STATE NY	13601			



HAZARDOUS WASTE DISPOSAL SITE (SEE INSTRUCTIONS)	2. DESCRIPTION OF HAZARDOUS WASTES DEPOSITED AT THIS LOCATION (SEE INSTRUCTIONS)	3. EPA WASTE CODE	4. WASTE DISPOSED OF QUANTITY OF WASTE (TONS)	SOLID SOLID ORUMS	5. WASTE DISPOSAL DATES	6. TRANSPORTER OF HAZARDOUS WASTE (SEE INSTRUCTIONS)
03 #3	Hechyl Echyl Kecone Peroxide	- U160	2	- X	3/77 to	7 #2
DC-#1	Naphthalana	W165	.16	×	1/52 to	T-#1
DS#2	- Naphthalene	U165	.08	-X	1/70 to	T #1
DC #3	Nophsha lene	COLO	.01-	*	8/77 to 12/01	т #3
nc #1	Tetrachieresthylens	U210	8 28	v	1/52 to 1 2/69	т #1.
-85 #2	- Tetrach loroethy lene	U210	3 49	-X	1/70 to	T #1
-DS #3	Tetrachlereethylene	U210	1.84	×	8/77 to	T #3

NAME New York Air Brake (Co.	ICS NUMBER	R - EPA ID NUMBER 12235216
ADDRESS Starbuck Ave.			
CITY Watertown		STATE NY	13601



1, HAZARDOUS WASTE DISPOSAL SITE (SEE INSTRUCTIONS)	2. DESCRIPTION OF HAZARDOUS WASTES DEPOSITED AT THIS LOCATION (SEE INSTRUCTIONS)	3. EPA WASTE CODE	4. WASTE DISPOSED OF QUANTITY OF WASTE (TONS)	SOLID	5. WASTE DISPOSAL DATES	6. TRANSPORTER OF HAZARDOUS WASTE (SEE INSTRUCTIONS)
-DG-#4	Tetrachlor octhy lene		.19	X X	8/81 to	T #3
-05-#1	Toluene	U220	1.97	-X	1/52 to 12/69-	7 #1
-DS #2	Toluene	U220	2.09	×	1/70 to 7/77	T.#1
DS #3	Toluene	U220	1.22	¥	8/77 to	T_#2
- 95 1	Taichleacthyless	<u> </u>	16 58	v	1/52 to -12/69	T-#1
-03 #2	Trichlorethylene	U228	6 99	¥	1/70 to	T #1
- 86-#3	Trichlorethylene	U228	4.87	×	0/77 to 7/81	T.#2 -

12

NAME
New York Air Brake Co. NYD002235216

ADDRESS
Starbuck Ave.

CITY
Watertown

ICS NUMBER - EPA IO NUMBER
NYD002235216

STATE ZIP
NY 13601

GENERATOR FORM
PART - II



DATE July 18, 1984

. HAZARDOUS WASTE DISPOSAL SITE (SEE INSTRUCTIONS)	2. DESCRIPTION OF HAZARDOUS WASTES DEPOSITED AT THIS LOCATION (SEE INSTRUCTIONS)	3. EPA WASTE CODE	4. WASTE DISPOSED OF QUANTITY OF WASTE (TONS)	FOR GINOS	DRUMS	5. WASTE DISPOSAL DATES	6. TRANSPORTER OF HAZARDOUS WASTE (SEE INSTRUCTIONS)
DS #4	Frentoreunytene	uzzô	. 19	^	X	8/81 co 1 2/81	T #3
DC #1	Yylono	11239	4.97	V		1/52 to 12/69	т #1
<u>-06-#2</u>	X, lene	U239	2.09	X 2		1/79 to 7/77	T-#1
-06-#3	- Xy lene	- V2 39	1.22	-*		9/77 to	7 #2
						•	
		·	•				

HAZARDOUS WASTE DISPOSAL SITE CODE FOUND IN COLUMN ONE

CODE	•	EXPLANATION
DS #1	CITY - CCUNTY - STATE -	Storm and sanitary sewer system Watertown Jefferson New York Domped down the drain
DS #2	STREET - CITY - COUNTY - STATE -	Industrial landfill maintained by the New York Air Brake Company North side of Starbuck Ave. Watertown Jefferson New York Pouring liquids on the ground and landfill solids
DS #3	STREET - CITY - PROVINCE -	Tricil Limited's Incinerator C.P. 59 Ville Ste-Catherine Quebec Canada Incineration
DS #4	STREET - CITY - COUNTY - STATE -	Solvents & Petroleum Services, Inc. 1405 Brewerton Road Syracuse Onodaga New York Solvent Recovery
TRANSPO	RTER OF HAZARDOUS	WASTE CODE FOUND IN COLUMN SIX
T #1	STREET -	New York Air Brake Company Starbuck Avenue Watertown New York 13601
T #2	STREET CITY	- Seaway Disposal Systems Inc. - Rox 156 - Felts Mills - NEW YORK 13638
T #3	NAME STREET CITY STATE	Solvents & Petroleum Services Inc. 1405 Brewerton Road Syracuse New York 13208



MEMORANDUM

TO: FROM: Dave Engel

Darrell Sweredoski

SUBJECT:

NEW YORK AIR BRAKE LANDFILL

DATE:

October 7, 1985

The following is a transcription of a letter received in this office on September 3, 1980 from a concerned citizen.

"Dear Sir: I am informing you of a chemical dumping grounds in this area; and I would like to know how much of a hazard this is to the area.

This dump is known as the Mew York Air Brake dump.

I have seen drums burning and leaking into creeks in this vicinity. I have also been informed that a city fireman received a burn to his face from mud. If I am correct this is an acid burn. Upon other inquiries I have found out Fireman Chief Bates knows of this problem but has failed to report it to the D.E.C.

I am frightened that if I sign my name my job will be in jeopardy, but if nothing is done about these chemicals that are appearing in drums and being dumped I will cite your office for not acting on this problem. I also want it known Chief Bates knows of this and is endangering his men having them entering an area of unknown chemicals. I do hope this fireman is not scarred from this carelessness of the Air Brake.

Please do not force me to come forward and jeopardize my job and my family.

The New York Air Brake provides much for this community but has no right to put it in danger."

"Please do not ignore this."
"Please Investigate."

"<u>Concerned</u>!"

If I can be of further assistance feel free to contact me.

Darrell M. Sweredoski, P.E.

Sr. Sanitary Engineer

Region 6

DMS: kw



NEW YORK STATE
DEPARTMENT OF ENVIRONMENTAL CONSERVATION
DIVISION OF SOLID AND HAZARDOUS WASTE

٠.	• •		FACILITY INSPECTION REPOR	T
Ŀ	-		LEACHATE .	•
	[~		1 Leachate is entering surface water. 2 Leachate is known to be contravening groundwater stand	larrie.
·		_	3 Waste is being placed into water.	51U3.
			BURNING	•
1		_	4. Refuse is burning without permit or not under permit cor 5. There is evidence of unapproved previous burning. See	
			COVER	emposition?
	1	_	193 O Freyous bays waste is not covered.	•
		_	7 Refuse is protruding through daily, intermediate or final c 8. Intermediate or final cover is not in place or properly app	
	1		GRADING	neco.
	1		9 Depressions, ponding, cracked cover, or slopes steener th	un 1 on 3 exist.
	1		10 Vegetative cover is missing or inadequate on completed	reas no veg.
	1		11 Soil/erosion or other drainage problems exist. SEPARATION: DISTANCES	COVER A.
	ľ		12' Waste is closer than 50 feet to site boundaries.	. •
	ļ	_	13. Refuse is being placed less than 5 feet above groundwate	
	2	_		ainage
	REMARKS	-	NUISANCE CONDITIONS 15 Odors are detectable off site.	swales
	3		15 Odors; are detectable off site. 16 Blowing dust or dirt is a nuisance.	
	-		1.7 Papers are uncontrolled or blowing off site	•
			18 Noise is a nuisance off site.	
		=	OPERATION CONTROL 19 Operation Permit conditions are being violated: (List conditions)	NO.
		_	20 Waste is not sufficiently confined or controlled	MINOUS PERMIT
	1	_	21. Refuse is spread in layers thicker than 2 feet.	
-W-	ļ	_	22 Refuse is not compacted or compacted insufficiently. 23 The working face height is greater than 10 feet.	•
J. T.			24 Equipment on the site is not adequate for proper operation	on.
= W_	1	-	SAFETY AND HEALTH	
= -	1		25. Salvaging is uncontrolled or is creating a safety hazard.	
" + "	2	L	26. :Rodents, insects, birds, or other vectors are not controlled	i.
αc	37	()	27 Unsafe conditions or equipment exist. (List items) 28. Methane gas is known to be leaving the site.	
DATE	┝	<u> </u>	ACCESS CONTROL	
	2		29 Accèss to the sité is improper, unsite, or inxequately co	ntrolled:
12	l;	-	30 The sile is open without an attendant. 31 Intermation about the site is not posted, (e.g., hours of open without an attendant.)	
20	¥	-	32 Access to the operating area is poor or unsafe.	RETALIKONIJ
\	ž	Z	OTHER	
3 ℃	8 ,5	<u>~</u> _	33 Uncontrolled leachate is visible on, or near the site.	
₹0_	2	RG	34. The quality of cover material is madequate. 35. Slope of working face is steeper than 1 on 3.	
FACILITY SNO	NSPECTOR'S NAME	0	36 Monitoring wells are not operative.	
¥ ~2	Š	Σ_	37 Unapproved wastes have been deposited since last inspec	tion.
200	=	ريا	38. Operator is unfamiliar with site boundaries, operation plai 39. Land application of waste to frozen/snow covered ground	or during periods of
	7	. 🗔	rain.	an against benieve or
- H	77	i 1	정 40. Soil pH is below 6.5:	

FACILITY NAME New YORK AIR BRAKE NUMP Stanback Ave - Just PERSONS INTERVIEWED AND TITLES Marc Wuerschmidt - Propert Engineer Dave Stanley - Plant Engineer of Maintenance Dept. SITE SKETCH/COMMENTS (additional sheets attached) ⊠ No U ve thutos taken 0 MW- DO2 (slides) Leachede to surface drainuge swales FINAL Elevations Resched 0 MW-DOI Monitoring, Well- 1 UOI NEW YORK BRAKE COMPANY PEARL



MEMORANDUM

TO: FROM:

SUBJECT:

DATE:

John Kenna Tom Morgan Jungan New York Air Brake Industrial Dump -Facility #23N02 December 3, 1984

On September 26, 1984, we received a Part 360 from New York Air Brake for the operation and potential expansion of their industrial dump. The submittal was grossly incomplete and were advised of such by Randy on October 18, 1984. Up to today December 3, 1984, we have received no response whatsoever.

Perhaps the time has come to move into an enforcement mode. At the very least, a Consent Order is desirable in order to establish time frames for submittals and ultimate compliance (if possible).

TFM:mta

A SOLID WASTE MANAGER	BPMI PALI	1 1 1 V			7-26-87
APPLICATION INSTRUCTIONS ON REVERSE SIDE	11711 / . /:	5/10/12	DEPARTMENT ACTION	-	DATE
			☐ Approved ☐ Dis		
OWNER'S NAME		(Street, City, State, Zip Coo			3. Telephone No.
ew York Air Brake Company	Starbuc	k Ave., Water	town, NY 1	3601	315-782-7665
OPERATOR'S NAME	5. ADDRESS	(Street, City, State, Zip Coo	ie)		6. Telephone No.
w York Air Brake Company	Starbuc	k Ave. Water	town, NY 1	3601	315-782-7060
NGINEER'S NAME		(Street, City, State, Zip Coo			. Telephone No.
Brien & Cere Engineers		ckley Rd., Sy	•		•
ON-SITE SUPERVISOR	11 ADDRESS	(Street, City, State, Zip Cod	Tacase, Mi		12. Telephone No.
	1		*=		
ichael G. Souva Has the individual named in Item 10 attender	Istarbuc	<u>k Ave., Water</u>	town, Nt 1	2001	<u> 515-782-7000</u>
Yes Date Course Title	J A DEPARIMENT	Location			□ No
PROJECT/FACILITY NAME		15. COUNTY IN WHICH FA	CILITY IS LOCATED ,	16. ENVIRO	NMENTAL CONSERVATION
ew York Air Brake Com Land	lfill	Jeffer	son	REGION	· VI
TYPE OF PROJECT FACILITIES: Composting				ncineration	Pyrolysis
☐ Resource Recovery-Energy ☐ Resource Recove	ery-Materials	Other			
HAS THIS DEPARTMENT EVER APPROVED PLANS AND					
AND/OR ENGINEERING REPORTS FOR THIS FACILITY	Yes	Date	No.		
LIST WASTES NOT ACCEPTED	· · · · · · · · · · · · · · · · · · ·				
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BRIEFLY DESCRIBE OPERATION					· · · · · · · · · · · · · · · · · · ·
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MEMORANDUM

TO: FROM: SUBJECT:

Bob Guiendon Darrell Sweredoski New York Air Brake, Disposal Site

DATE:

April30, 1981

On April 29 Bud Rice informed me that the stream running adjacent to the Air Brake dump was colored a bright orange, and green and white barrels were floating in the ponded water next to Starbuck Avenue. We drove to the area and walked across the field to the front of the dump area. The Air Brake is continuing to dump barrels into the fill area along with the core sand. In addition, there is an area of uncovered refuse next to the drainage ditch at the toe of the fill. Considerable amounts of leachate was evident in the ditch, and an oil sheen was on the water. Leachate samples will be taken in the near future to determine what violations are occuring.

I would like to see the Air Brake brought under Part 360 permit as soon as possible. This will enable us to bring this site into compliance since the Air Brake has not shown any initiative to do so themselves.

DV15

DMS:ks



1. To Cife

SUBJECT:

Bert Mead Bud Rice Buo N.Y. Air Brake

DATE:

April 29, 1981

On April 28, 1981, I noticed an orange colored tint in surrounding water at N.Y. Air Brake disposal site adjacent to Starbuck Street. Also, I noticed green and white barrels floating and submerged in the surrounding pond. The orange colored tint appeared to be leachate from the open disposal site.

It also should be noted that there is a housing development on the other side of Starbuck Street in which there were a number of small children playing. They could easily become in contact with the leachate from this landfill.

I for his site due to its location should be investigated further and immediate action taken if necessary to clean this mess up.

MLR: mts



MEMORANDUM

TO: FROM: Bert Meid, Bob Guiendon Darreil Sweredoski

SUBJECT:

New York Air Brake Dump Site

DATE:

September 10, 1980

On September 8, 1980, in response to a letter received complaining about chemicals burning at the dump, Bill Moore and I inspected the dump site.

Aside from the spent foundry sand and core material dumped there, I estimated hundreds of drums scattered throughout the site. The labels on the barrels indicated flammable and toxic material. The majority of the labels read "isocure (triethylamine)" and Xylene. We found no full barrels, but some still contained a small amount. I checked one of the "isocure" barrels by removing the bung and smelling of the air in the barrel. I was struck by an extremely strong ammonial odor, indicative of triethylamine.

We also noted that barrels and foundry sand were recently dumped into and along the drainage ditch that skirts the site. There was a considerable amount of cafeteria waste dumped along the lower level of the site, and has not been covered for a long time.

I next contacted the Watertown Fire Department about the site. I was told that the Department has answered a number of calls about fires at the dump this year.

The most recent fires occurred during the summer shut down when hot core materials apparently started on fire by spontaneous combustion. During the spring the fire involved empty or partly empty barrels with flammable material in them.

I noted that the Clovedale House Development is within sight of the dump site.

I believe that this is a hazardous situation at this dump due to the flammable materials and barrels disposed of at the site. A bunged barrel could act as a bomb during a fire causing injury to firemen and other people nearby. Also toxic fumes could drift into the nearby residential area.

IMS:ms / DOS



MEMORANDUM

ŤÖ:

For the Record

FROM:

John P. Kenna

SUBJECT:

New York Air Brake Dump Site

DATE:

October 5, 1976

On October 4, 1976, Luman Rockhill and I went out to Plaza Drive, City of Watertown, to collect samples of the leachate from the New York Air Brake dump site. Upon reaching the point in Plaza Drive where the leachate drains through the culvert under Plaza Drive, we observed a "No Trespassing" sign on the east side of Plaza Drive and a bulldozer and backhoe digging out the bed and banks of the intermittent stream that drains down from the dump.

We took pictures of this operation and then crossed Plaza Drive to the west side where we took samples from the stream. At this point, the stream was covered with a reddish-orange oily material. We followed the stream down to a point just east of Mill Street where it enters a pond and apparently seeps into the ground through a number of crevices. The oily material was apparent the full length of this stretch of the stream.

John P. Kenna, P. B.

Senior Sanitary Engineer

Region 6

JPK:eo

State Office Suliding, 317 Washington Street Matertam, New York 13601 315-782-0100 Ext. 306

4"

Peter &. A. Berle

August 10, 1976

Ar. Frunk V. Benney Haw York Air Bruhe Company Starbuck Avenue Vetertam, Haw York 13601

Door Ar. Desert

in a little dated July 23, 1970 us indicated our concess of the Physics was too being disposed of as the list Air high disposed site, and the liquid unities that the lighthings into the Congest's Floor drafts system.

through you phouse to the second of the seco

Very trely yours.

N. Richard Real Hos. P. S. Senior Senitary Englaser Region 6

Mile Jes

State Office Building, 317 Washington Street Watertown, New York 13601 315-782-0100 Ext. 306

XXXXXXX

Peter A. A. Berle

July 23, 1976

Mr. Frank W. Denney New York Air Brake Company Starbuck Avenue Watertown, New York 13601

Dear Mr. Denney:

On July 19, 1976 at 10:00 a.m., Mr. Robert Guiendon of this office observed a tank truck bearing identification of the New York Air Rocke Campany, discharge liquid wastes onto the company's disposal site. He reported that the tank truck was approximately 500 to 750 gallons in size and that the liquid wastes had an odor of languar or paint thinner. Hr. Guiendon also reported that essentially all of the liquid waste trickled down an embankment and eventually discharged into a small drainage stress that adjoins the Company's disposal site.

On July 21, 1976, we received a report that an "odernous influences" was present in the tributery streem to Kalesy Creek and some of those wester hell backed up into a cellar on Alemandria Avenue. Hr. Rockhill, of this office, investigated the situation and collected samples from the cellar, as well as the tributery streem. The cellected samples had an oder characteristic of a larger or paint thinner.

In observing a map of the City's senitary and storm system layest, we make that a storm sower passes through the New York hir Brake passesty and eventually discharges behind the Leanou Trailer Park on LeBny Street. In addition, the drainage street from the New York hir Brake disposal site eventually enters this storm sever at a catch basis on LeBny Street in the vicinity of the trailer park.

On July 21, 1976, Mr. Kemma and Mr. Bookhill observed the conditions of the stream adjoining the company's disposal site. While there was not recent evidence of any lacquer or paint thinner in the stream, there was ample evidence of leachate entering this water course flyin your disposal site.

While we cannot conclusively prove that the unter quality problems occurring behind the trailer park are related to the disposal operations at the New York Air Brake Company, we suspect the problems are related.

Frenk W. Denney Page Two July 23, 1976

It would be appreciated if you could determine what liquid wastes are presently being disposed of at the Company's disposal site and what wastes are being discharged into the Company's floor drains. After this information has been developed, please contact us in order that we may discuss the situation in detail.

Year truly years,

Berton B. Heed Regional Engineer Region 6

Mille Marke See



LEGE

BOUNDARIES AND PLACES

City . .

Indian Reservation

Built-up Area (Over 25:000 population incl

CLASSIFICATION OF POPULATED PLA

100.000 or more

50,000 to 100:000

12.500 to 50:000

2.500 to 12.500

250 to 2,500

250 or less

TRANSPORTATION

Highways

Divided Highways

Full Control of Access

Partial or No Control of Access

Undivided Highway

Touring Route (State: U.S., Interstate)

Touring Route Markers

State: U.S., Interstate

Owner (If Other then Operator)

Company Having Trackage Rights

Airports (Open to the Public, Military)

Food, Gas: Rest Rooms

Gas, Rest Rooms

RECREATION FACILITIES

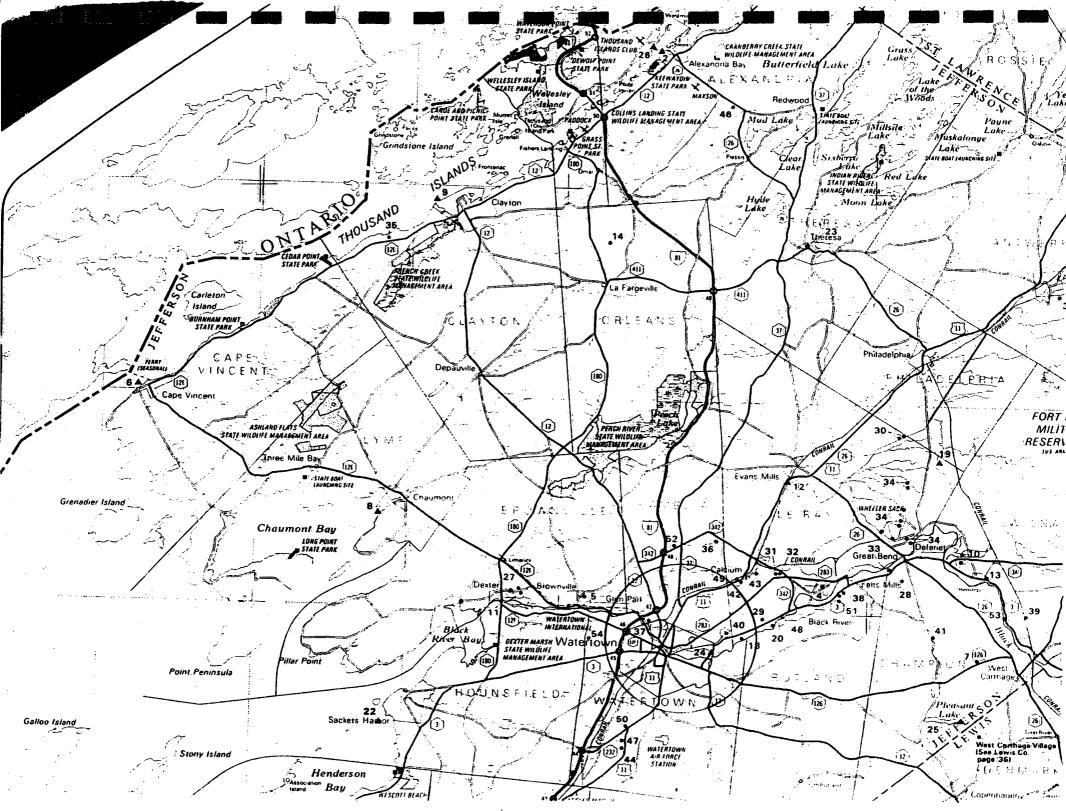
State or National Recreation Area

State Campground

State Boat Launching Site

State Fish Hatchery

Other State Recreation Site



JEFFERSON COUNTY

ID NO	COMMUNITY WATER SYSTEM	POPULATION	SOURCE
Munic	inal Community		•
1	Adams Villana	1063	A Market Company
2	Adams Village	1997	- Well's (infiltration Gailery)
3	Antwern Village	1900	.St. Lawrence River
i,	Antwerp Village. Black River Village.	1200	. Wells (Sorings)
5	Brownville Village.	1290, .	.wells (Springs)
6	Cape Vicent Village.	750	wells
•	Carthage Village (See No 1,	/50	.St. Lawrence River
	Lewis Co, Page 36)	1.500	*
7	Champion Hill Subdivision	24700 21	Module
8	Chaumont Village		Lake Open a
ğ	Clayton Village	2300	y Lake Ontario
10	Deferiet Village.	350	Valle
11	Dexter Village	1070	Wallen
12	Evans Mills Village,	715	West Creek
13	Herrings Village	150	Malla
14	Latargeville Water District.	500	Wells
15	-mannsville village	576	Wells
16	Natural Bridge Water Company Fast	. 75	Wells (Infiltration Callani)
†7	Natural Bridge Water Company West	72	Wells Infiltration Callegus
-18	Patricia Drive Subdivision	· . 60	Wells
19	Philadelphia Village.	900	Reservoir
20	Riverbend Estates.	100	Wells
21	Rodman Water Supply.	150	Wells / Infiltration Callock
22	Sackets Harbor Village,	1200	lake Ontario
23	Ineresa Village	996	Motte
24	Watertown City	35000	.Black River
25	West Carthage Village (See also No) 14	
	Lewis Co, Page 36)	2300	.Pleasant Lake
Al 14	Landada a 176 a a companya a sana		
MON-W	lunicipal Community		
26	Alexandria Bay USCG.	NA	St. layrence River
27	DEEEZV ADOLL MODILE HOME Park	an	LIGILIC :
28	Bud's Trailer Court.	22	Wells
29	Colonial Manor.	150	Welle
3.0	Delles Mobile Home Park	42	Wells
31	Edgewood Court #1.	1:1.8	Wells
32	Lagewood Court #2.	50	Wells
33	Fairnaven Court.	. 22 .	Wells.
34	FORT Drum US Army Base.	5000	Walle
35	POXY S Trailer Park	25	Wállé .
36	Gardner's Mobile Home Park	1 7	Walie
→ 3′7	Garland City Trailer Park	100	Wells
38	Gleasons Trailer Park	30	.Wells
-39 -40	Hall's Mobile Home Park.	30.	.Wells
41	Heather Acres.	100	Wells
42	Hillside Trailer Park.	15	.Wells
43	Lake's Trailer Park	180	Wells
44	Leray Park		Wells
	Northland Estates.	140	Wells
46	Overton Trailer Park. Parker's Trailer Park.		. We I T S
47	Pine Grove Mobile Village.	20	Wells
48	Revera Trailer Park.	77.	. WELLS
49	Ridgedale Trailer Court.		uncits,
	Rules traiter Court.	7.7	Molls
. D I	Sandy Pines Mobile Home Park	MΔ	Walle
52	Summit Trailer Court.	115	Walle
53	Virkler Trailer Park	12.	Wells

PRELIMINARY ASSESSMENT OFF SITE RECONNAISSANCE INFORMATION REPORTING FORM

Date: 11/2/87	
Site Name: NEW YORK AIR BRAKE LANDFILL	TDD: 02-8710-43
Site Address: Purol ALE Street, Box, etc.	
Town	
County	
State	
NUS Personnel: Name	Discipline
SUSAN KENNEMY	BIOLIXACT
JANE BULLS	END. SCIENTIST
Weather Conditions (clear, cloudy, rain, snow, et	c.):
Weather Conditions (clear, cloudy, rain, snow, et	
CLEAR, 65°, WINDS FROM	THE SOUTH
	THE SOUTH
Estimated wind direction and wind speed: _ Fro	THE SOUTH

PRELIMINARY ASSESSMENT

INFORMATION REPORTING FORM

	Date: 11/2/87				,		
	Site Name: NY AIL BOAK	د رن	<u>. </u>	TDD:	01-87b	-43	
	Site Sketch:						
i	Indicate relative landmark Provide locations from whi	location	ons (streets, otos are täker	buildings,	streams, etc	.).	
	TREES		OPEN	v+1	ELO		FARM
		(DIRT RUND)				<u>-</u>	A LAND
	Rupo Co.	PURMY AUE	FARA	n		, , , , , , , , , , , , , , , , , , ,	
-	Signature: Susaa M. /	ken		Date:	12/87	/	
	Countersigned: Jane Bul	_	57.)ate://	1/2/87		-

PRELIMINARY ASSESSMENT INFORMATION REPORTING FORM

Date:1 2 67
Site Name: NY. AIR BRAKE LANDENL TDD: 02-8710-43
Notes (Periodically indicate time of entries in military time):
THE LANDFILM IS LOCATED AT THE END OF
PURCH ALL DIRECTLY BEHAND THE COMPANY THERE
15 NO FENCE SUROUNDING THE PROPERTY THERE
15 A CATE FOR THE ENTRANCE TO THE LANDEN BY
IT IS OPEN A MY AIRBRAKE DUMP TRUCK WAS
NOTED ENTERING THE LANDELL CARRYING WHAT
APPEARED TO BE FILL MATERIAL THE CLOSEST
RESIDENCE IS A FARM LUCATED APPROXIMATELY I HIVE
FAST OF THE SITE. THE RUPP TRUCKING CO. WAS IS
LOCATED DIRECTLY SOUTH OF THE LANDELLY THERE
WE A GULLY EN FYONT OF THE LANDER WITH WATER
IN IT THERE ARE SEVELAL HOMES LOCATED AT THE
OPPOSITE FLO DE PUNOY QUE ALONG PEAU STEER.
THE STARAIR SCHOOL IS LICATED APPLOAMANCE ACROSS
THE STREET FROM THE WEST SIDE OF THE LANDENL
THERE IS A FENCE ALONG THIS SIDE OF THE LANDERY
BUT IT IS NOT CONTINUOUS AND THE PROPERTY IS EASILY
ACCESSIBLE THERE ARE SEVELA APARTMENT PURDICES
Signature: Sugar Karado Date: 11/2/87
Signature: Date: 11/2/87 Countersignature: Date: 11/2/87

PRELIMINARY ASSESSMENT INFORMATION REPORTING FORM

Date: 4/2/87	
Site Name: NY AUBLAKE LANDEN TDD: 02-8710-43	
Notes (Cont'd):	
DRECTLY ALMOSS THE WEST SIDE OF THE LANGELL TWO ON STAYBULK AVE , AND SEVERAL OTHER FUTURIES	
TO THE LANDEIL. THERE ALE ALSO STORM DRAINS	
LOCATED ALONG STARBUCK ALE. A STREAM WAS	
THROUGH THE LAMPEN PLOPERTY THREE IS A PIPE ON	U.S.
THE EAST SIDE OF STARBUR ALE THAT CARRIES THE	
THE WATER IS STAWNANT	Eui
JI-MANA MARIANA	
	•
Attach additional sheets if necessary. Provide site name, TDD number, signature, and countersignature on each.	
Signature: Sun teanery Date:	
Countersignature: Jane Bullin Date: 11/2/87	

PRELIMINARY ASSESSMENT INFORMATION REPORTING FORM

ite Name: NA AIR BRI	ake lakasen	Thn	0.04.
		. 1 <i>D.D.</i> :	02-8710-43
hotolog:			
rame/Photo umber <u>Date</u>	Time	Photographer	Description
P-8	2:43	J. Bary	PHOTO FRIME WEST LORGE AT
P-9	2:45	J.Barres	LANDENL ELTRANE
P-10	2:46	J.Baus	FACILIE AW LOOKULE AT
P-19	·····		FIELD ADTACENT TO
(P14	322	TRAUS	SACKING EAST FROM STABLE
			Shir IN BAKLHOWN
2-16	3:259	h	LOOKING SO THE DELLA
			PLAKE ST.
P-17	3:29	n ———	FRON FARM ON PATTERSON
P-18	3:37	7	MY AIRANNE CON TUANOFILE Looking at Stream, LFIN
ttach additional sheets if d countersignature on ea		rovide site name,	TDD number, signature, At 1.
gnature: Sucan to	T.		

PLAID DE	· It It	•
FARM LAKY	2	
(F W		I Lious
	PULDI A.F., Kupp (o.	なしん
1 Spream	M. Y. AIR BRANIC	
Con 1500 Colonial Strange	PAREINI.	
SWAMPY ALL STAYPERS	PARKIN.	